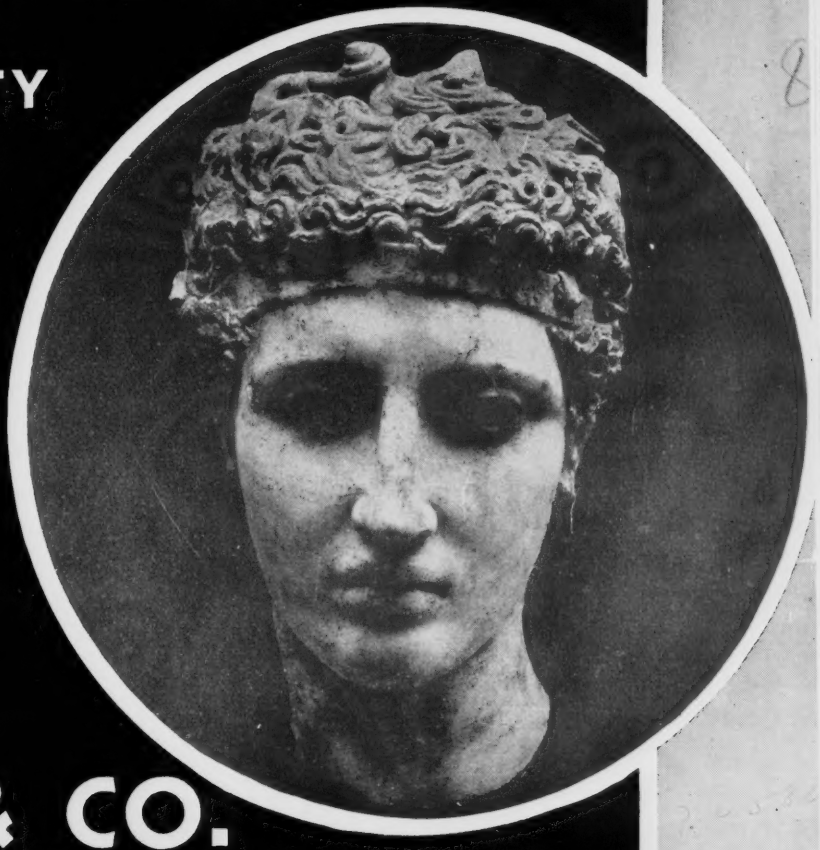
Soap

Enduring QUALITY

FOR sculpture to persist or for excellent perfuming materials to persist—there is found much in common.

Consider . . . careful choice of ingredients, artisans of highest acknowledged talents to fashion them, reputation for honest workmanship, an ideal of perfection to be attained.

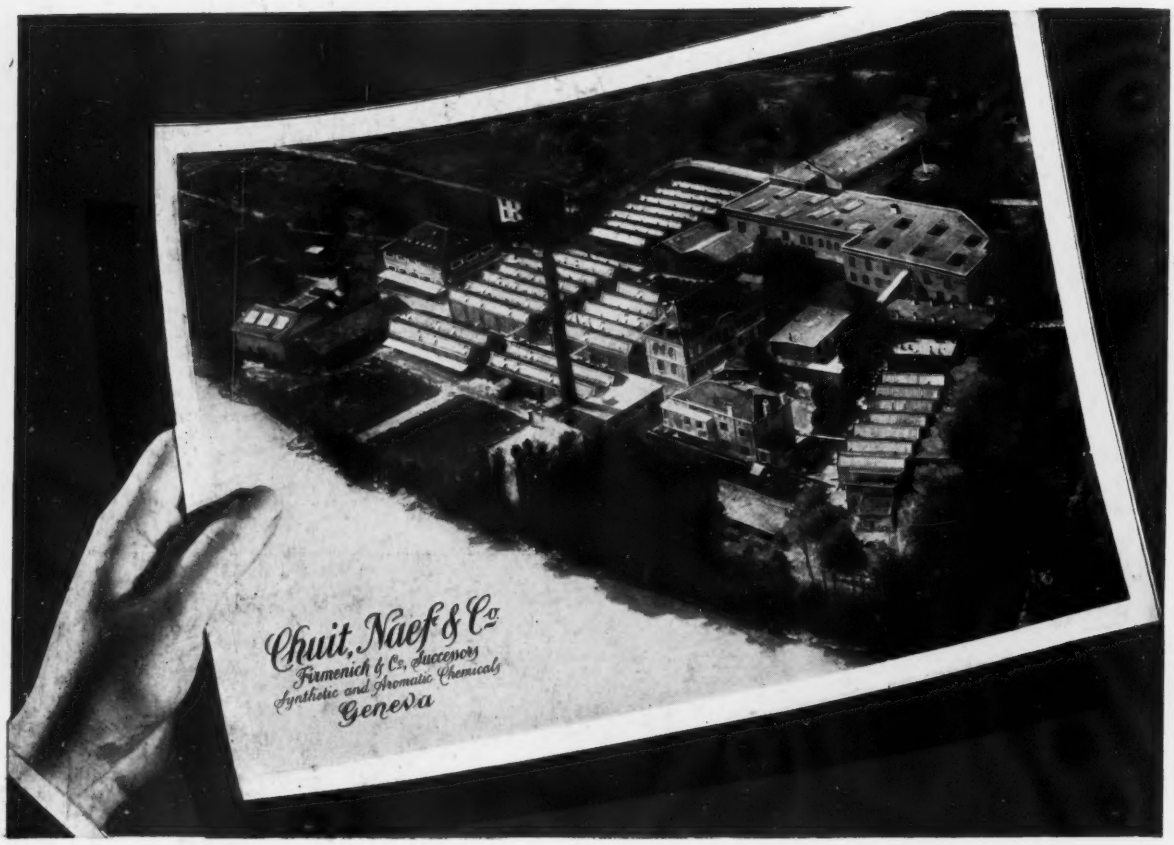
Ungerer's perfuming materials for Soapmakers answer to this description. We offer you the full benefit of this priceless asset of ours . . . get Ungerer products and you are getting products of Enduring Quality.



UNGERER & CO.

13-15 West 20th Street NEW YORK

and Sanitary Chemicals



Forty Years of Leadership

Since 1895 the name of Chuit, Naef has been synonymous with the production of the highest quality group of synthetic and aromatic chemicals obtainable. Today, as then, this reputation continues unmatched.

Throughout forty years the Chuit, Naef organization has expanded its products to the point where they now rank as the most complete line of perfume raw materials available to the soap, perfume extract and toilet goods fields.

The laboratories at Geneva, Switzerland are constantly *showing the way* in the development of new aromatic materials, basic specialties and finished compositions that aid *you* in solving your perfume problems.

As sole United States agents, let us convince you of the remarkable adaptability of our products to your line!

FIRMENICH & CO., INC.

120 FIFTH AVENUE, NEW YORK, N. Y.

Dealer's Choice

No established name or trade-mark binds the leading dealers to Fuld products under private label. They choose them on quality and salability.

Fuld's Drain Pipe Cleaner "OPENS"

When you deal your customer Fuld's Drain Pipe Cleaner (Hot or Cold Water Types), you're giving him the straight flush that will beat drain stoppages.

FULD'S TOILET BOWL CLEANER allows the user to guard his hands and still keep fixtures sparkling.

BREVITEE Metal Polish "CHECKS" CORROSION

This new abbreviation for polishing work brings out the best in metals in next to nothing at all. It is especially adapted for out-of-doors use because its neat chemical structure and balance make it act to check re-corrosion.

Vitozone DEODORANT BLOCKS "RAISE" the standard

These famous deodorants are the hardest blocks made and the easiest to sell. It's the Vito-zone process that gives an extra perfume reserve of Fuld's own exclusive aromatics. And it's sealed in pure paradichlorobenzene under 80-tons pressure.

Fuld's New Self-Polishing WAXES "Stand Pat"

Better than ever these new self-polishing waxes stand wear—stand mopping and still stand pat. They cover the complete range of the most desirable concentrations of pure Carnauba Wax and are guaranteed WATER-PROOF and SLIP-PROOF.

Selling Jobbers ONLY!

DEODORANT BLOCKS
LIQUID DEODORANTS
LIQUID CLEANERS
LIQUID SOAPS
OIL SOAPS
INSECTICIDES
DISINFECTANTS
SELF POLISHING WAXES
PASTE WAXES
POWDERED WAXES
FLOOR SEALS
FLOOR TREATMENTS
METAL POLISHES
FURNITURE POLISHES
PLUMBING SPECIALTIES
SPECIAL CLEANERS
SOAP DISPENSERS
DEODORANT BLOCK HOLDERS

FULD BROS.

702-710 SOUTH WOLFE STREET BALTIMORE

SALES OFFICES: SEATTLE • KANSAS CITY • SAN FRANCISCO • BOSTON

METROPOLITAN NEW YORK REPRESENTATIVES: EASTERN STATES SUPPLY COMPANY, BROOKLYN, N. Y., EVergreen 8-2498

It was in 1823 that the brilliant young English chemist and physicist, Michael Faraday, working at the Royal Institution under Sir H. Davy, succeeded in liquefying chlorine. In the short limb of a bent test tube he placed a compound which liberated chlorine. The tube was then hermetically sealed and the substance heated. Then by cooling the long limb of the tube a yellow liquid collected which was liquid chlorine. Strangely enough chlorine is manufactured today by the application of another of Faraday's great discoveries, in the realm of electricity. Faraday also produced several new kinds of optical glass, and all in all, his discoveries were of first magnitude in value to modern industry.

Through The Centuries With Alkalies

There may be no "style angle" to the products of this Corporation, but it has become the fashion of discriminating buyers to specify COLUMBIA. This insurance of product quality and uniformity; of prompt and intelligent service; of modern, trouble-free packaging, so vitally important in the handling of liquid chlorine, is alone responsible for COLUMBIA's commanding position in the alkali industry. In buying soda ash, caustic soda, or liquid chlorine it pays to be "label conscious". Specify COLUMBIA.

COLUMBIA

SODA ASH
CAUSTIC SODA
SODIUM BICARBONATE
MODIFIED SODAS
LIQUID CHLORINE
CALCIUM CHLORIDE

THE COLUMBIA ALKALI CORPORATION
BARBERTON • OHIO

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Soap and Sanitary Chemicals

Volume XIV
Number 9

SEPTEMBER
1938

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SANITARY Products Section, which forms a part of every issue of SOAP, begins on page 71.

ABP

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254 WEST 31st STREET NEW YORK, N. Y.

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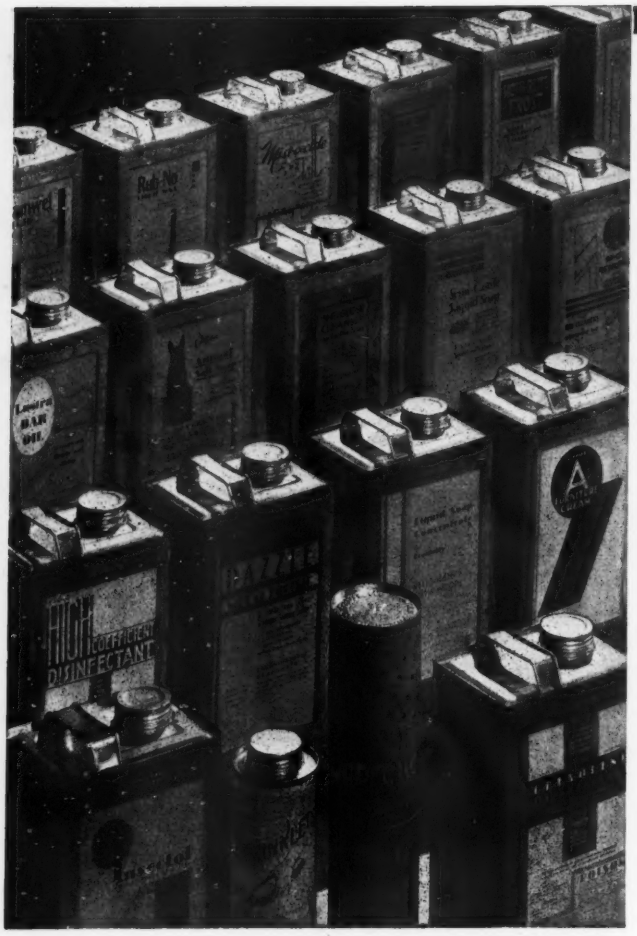
YOUR LINE



Now it is possible for you to build up a sales following with products identified exclusively with YOUR NAME!

Buy the Clifton Quality Line and repack it under your own name. Our attractive labels and leaflets will stimulate your sales into the Profit Division. (The Clifton Line has been doing just that for wide-awake jobbers since 1914.)

And our prices must be quoted to be enjoyed.

featuring

★ **QUALITY**
★ **PRICE**
★ **SERVICE**

CLIFTON CHEMICAL CO., INC.

246 FRONT STREET NEW YORK, N. Y.

Semi-Castile Liquid Soap	Pine Scrub	Furniture Cream
Foamwel Liquid Soap	Deodorizing Sprinklets	Insect Killer
Liquid Soap Base	Oil Soaps	Coal Tar Disinfectant
Liquid Soap Dispensers	Mopping Varnish	Pine Disinfectant
Cresolene Disinfectant	Rubless Wax	Theatre Spray
Bar Oil		

TO USERS OF LETHANE

..The MM&R Laboratories suggest immediate testing of..

DEODORANT L37 MM&R

A POSITIVE NEUTRALIZER OF LETHANE ODOR

IT NEUTRALIZES-but does not perfume. Most important feature of this great aid to users of Lethane is its positive ability to absolutely neutralize the odor of Lethane in Fly Sprays. Next in importance is the fact that DEODORANT L37 M M & R imparts no perfume whatsoever. This is desirable because it enables you to market a pleasant, unperfumed Fly Spray or to add the customary odors identified with your products after the Lethane odor has been neutralized. The third important advantage of the use of DEODORANT L37 M M & R as a neutralizer is that it reduces the volume of perfume required to impart the necessary odor. This is apparent since the neutralizing function of DEODORANT L37 M M & R minimizes the requirements of the perfuming agent.

Send the Coupon Below for a Free Testing Sample

For Perfuming Fly Sprays—

PERFUME OIL SWEETGRASS M M & R

THE ORIGINAL AND ONLY GENUINE SWEETGRASS ODOR

The amazing acceptance of PERFUME OIL SWEETGRASS M M & R is based on the outstanding merit of this odor for perfuming Fly Sprays. If you have not tested PERFUME OIL SWEETGRASS M M & R, send for a testing sample now and discover for yourself the extraordinary superiority of this highly specialized perfume oil.

☆

Magnus, Mabee & Reynard, Inc.
16 Desbrosses Street, New York City.

Gentlemen:
I'd like a testing sample of your—

☐ DEODORANT L37 M M & R

☐ PERFUME OIL SWEETGRASS M M & R

Name .....

Firm Name .....

Address .....

MAGNUS, MABEE & REYNARD, INC.

QUALITY ESSENTIAL OILS, BALSAMS AROMATIC CHEMICALS, ETC...SINCE 1895

16 DESBROSSES ST. M&R MAGNUS **NEW YORK, N. Y.**

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CANADIAN DISTRIBUTORS: Richardson Agencies, Ltd.,
454 King St. W., Toronto, Canada.

☐ Put me on the mailing list for your bi-monthly Catalog.

the Seal OF APPROVAL

How Anchor Amerseal Caps And Anchor Hocking Containers Are Tried, Tested And Proven Aids To Package Efficiency

Q. T. — Only a Q.T. (Quarter Turn) to seal Anchor Amerseal or Anchor Beacon Caps—which makes application swift and easy! Only a quarter turn to remove it—which pleases consumers and makes an ideal reseal! In sealing efficiency it has no peer either, because of the unique lugs that result in its air-tight, leak-proof seal. So strength and purity is held in—air and moisture and dryness kept out.

VARIETY — Note the diversity of products sealed with Anchor Amerseal and Anchor Beacon Caps — creams, salves, effervescent salts, oils, alcohols, etc.—only a few of the hundreds of drug and pharmaceutical items normally susceptible to leakage, evaporation and deterioration, but safely curbed when sealed by these efficient caps.

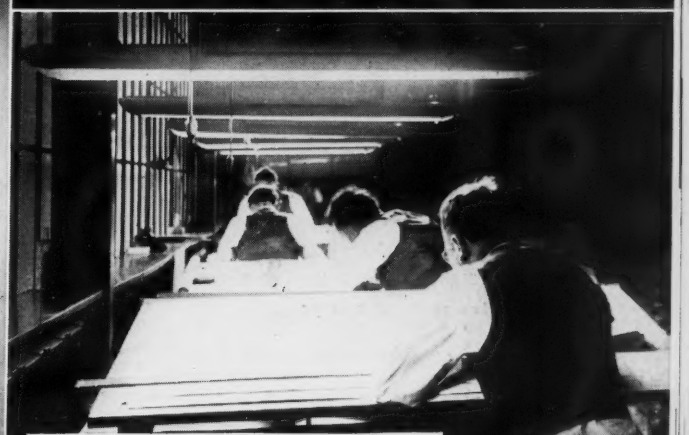
MILLIONS OF CAPS — Yes, Anchor stock rooms, of which this shows a corner, carry literally millions of caps . . . to insure service at the double-quick, in emergencies, as in ordinary times. Modern mechanized equipment enables us to assemble and load freight cars and trucks in jig time. Adequate stocks of raw materials, extensive manufacturing facilities help further in filling orders . . . with dispatch.

POINTS OF CONTACT — From the above cross section you can see just how the scientifically constructed lugs of the Anchor Amerseal Cap engage the *under* side of the glass threads and draw the cap *down* effecting a tight, uniform sealing contact around the full 360° of the container finish. The fact that the gripping contact is made at but two, four, and six points (depending on the size of the cap) on the *under* side of the glass threads not only prevents the cap from gumming or freezing to the container finish but it insures the easy removal of the cap with an easy quarter-turn.

"RAINBOW" PREMIUMS — The biggest premium opportunity in years! Colorful, exciting tableware—tangerine, blue, green and yellow—fits in with any color scheme. Can be offered as single pieces or sets. The deep, brilliant colors, wonderfully smooth and acid resisting, are permanently fired *on the outside*—food touches only crystal glass. Be the first in your field to exploit the sales booming possibilities of beautiful and vivid "Rainbow" tableware. Get full information; write at once.

EFFERVESCENT — Designed particularly for effervescent salts, these crystal glass Anchor Hocking Wide Mouth Ovals are but typical of our extensive P & P line of sturdy, well made glassware . . . glassware that has a luster and a brilliance worthy of the finest toiletry or *ethical* product.

LINE UP — In the line up of Narrow Neck Ovals, as illustrated here, you'll find Anchor Hocking represented by 23 different capacities from ½ oz. to 16 oz., inclusive, all manufactured under Anchor Hocking standards of accuracy and of glass quality. Name your needs; let us submit samples.



GLASS ENGINEERS — Exterior shape is only one element of glass container design. All new styles must be worked out from an engineering standpoint; for structural strength, adaptability to machine production, suitability to filling and sealing machinery and to shipping containers . . . as well as their all 'round practicality and economy for commercial display and consumer convenience. Here you see part of our engineering staff in one of Anchor Hocking's modern glass plants.

ANCHOR HOCKING

ANCHOR HOCKING GLASS CORPORATION, Lancaster, Ohio CONTAINER DIVISION

ANCHOR CAP and CLOSURE CORPORATION, Long Island City, N. Y., and Toronto, Can. CLOSURE DIVISION

HOW TO SELL SELF-POLISHING WAX *At a Profit*

IN TODAY'S HIGHLY COMPETITIVE MARKETS

BRIEFLY . . . forget "selling talk" and get a demonstration.

The average buyer today is more interested in how a wax is going to look on his particular floor than all the "talk" in the world. Give him a demonstration with Candy's Bright Beauty Self-Polishing Wax and make a sale!

Every time your men can put Bright Beauty on a prospect's floor . . . alongside even a wax that has already proven "eminently satisfactory" . . . you've practically got an order. That's a pretty broad statement to make, we'll admit, but we'll prove it to your satisfaction any time you will give us the opportunity.

What About Waterproofness?

A "talking point" that has been much overdone. Extremely waterproof materials now on the market usually fall down on some important quality . . . particularly in lack of lustre.

Besides, a wax is not a permanent finish like a floor seal. It is a top dressing intended to take the punishment of traffic and dirt. It should be readily removed when desired. Candy's Bright Beauty will not "milk" in wet weather, will not permanently water-spot around drinking fountains, washbowls, etc., will stand damp mopping . . . yet can readily be removed without the use of strong soaps or floor damaging caustics.

What About Slipperiness?

More "talk"! To be really non-skid, a wax would have to be so soft and sticky it would be impractical for use as a floor finish. Tell the truth with Candy's Bright Beauty . . . that the average person can easily and safely walk on the floor.

What about *solid content?* More "talk" to cloud the true issues . . . usually attempted to suggest "cheapness" of a low solid content wax. Obviously a high solid content wax could be loaded with cheap wax substitutes and fail dismally in floor performance.

The floor treatment business is still growing . . . and so is the competition. Your salesmen lock horns with a dozen or more competing wax salesmen every day in the week. How they meet that competition determines whether or not *your* company is going to get a fair share of the available business.

Give your men *facts* . . . about waterproofness, slipperiness, solid content . . . so they can shoot holes in competitive "selling talk." And give them a product like Candy's Bright Beauty that speaks for itself where it counts most—*on the floor.*

Sold Only by Distributors

Remember, Bright Beauty Products are sold exclusively through distributors. They are packed in attractive containers under your own label . . . never sold direct to the consuming trade. Bright Beauty Wax is competitively priced, yet can be sold so as to allow you a liberal margin of profit. May we send you a liberal experimental sample?

Al Candy, Jr.

CANDY & CO., INC. WAX SPECIALISTS FOR OVER 40 YEARS 2515 W. 35TH ST., CHICAGO

Manufacturers of Prepared Paste Wax, Spirit Liquid Prepared Waxes, Powdered Dance Floor Wax, Concentrated Cream Furniture Polish, Paste Cleaners, Rug Shampoo

THE NEW SAVOSCENT SERIES

Savoscents are new. Savoscents are different. Savoscents are remarkable as perfume agents for the better toilet soaps in that they produce a true, lasting *fine* perfume at prices comparable to the ordinary soap odors. Savoscents are used the same as soap odors. We list five of the new series.

Savoscent Lilas .... $3.50 per lb.
Savoscent Rosan..... 4.75 per lb.
Savoscent Constantine . 4.75 per lb.
Savoscent Lavendulet . 5.40 per lb.
Savoscent Jasmin..... 3.50 per lb.

VAN AMERINGEN-HAEBLER, INC.

315 FOURTH AVE., NEW YORK, N. Y.

"Aye, Mac, we're saving money, but what kills me is thinking of the money we didn't save before we started using that good

Niagara Caustic Potash"

P.S. You'll find it economical to use Niagara Caustic Soda and Carbonate of Potash, too.

Niagara
ALKALI COMPANY
42nd STREET, NEW YORK, N. Y.

Affiliated with Electro Bleaching Gas Co.
Pioneer Manufacturer of Liquid Chlorine

Distinctly NEW EX-ALK LIQUID CLEANER

FOR FLOORS AND GENERAL PURPOSE CLEANING

Controls Alkalinity

MAKE THESE TESTS

1. Pour about one-half inch of EX-ALK in test bottle. Add Phenol, which in the presence of alkali turns a bright red. Shake up solution. No color is seen.
2. Add an equal amount of water to above. Still no color.
3. Compare other cleaning soaps as in 1 and 2.
4. Pour EX-ALK into a soap solution that shows alkaline. The red color disappears. EX-ALK neutralizes the alkali.

Above tests prove the non-alkaline character of EX-ALK; and indicate how EX-ALK controls the alkalinity of cleaning solution.

EX-ALK is a *cleaner,* built to do a *cleaning* job on all surfaces. It is non-alkaline. Add ¼ pint (4 ounces) of EX-ALK to each 3 gallons of water to make the proper cleaning solution. *EX-ALK controls alkalinity.*

Plus All These Features

1. Heavy suds produced by EX-ALK, clean with a gentle, thorough action.
2. EX-ALK is free from highpowered "wetting agents" with such great penetration property as to drive dirt into pores and crevices.
3. Economical in use: 4 ounces of EX-ALK to 3 gallons water makes proper scrubbing solution.
4. Harmless to any surface that will stand washing with clear water.
5. Furnished in Pine or Sassafras.

"EX-ALK" *Product of* **THE DAVIES-YOUNG SOAP CO.**
DAYTON, OHIO

A Test Kit will be furnished Free with an order for 1 drum of EX-ALK

Send for FREE SAMPLE and Complete Information

THE DAVIES-YOUNG SOAP CO.
Dayton, Ohio:

Please send sample, prices and other information about EX-ALK Liquid Cleaner.

Name.....

Address.....

City.....

The Celebrated **FAMILY** of **DICALITE FILTERAIDS** cover the widest range of filtration requirements for soap, oils, and other liquors.

247 combined years of EXPERIENCE

THAT is what the men of the DICALITE organization together have put into the production and service of diatomaceous silica Filteraids. This great experience has resulted in the development of several new superior quality DICALITE FILTERAIDS—*superior* because they give the clarity desired at HIGHER flowrates—therefore, at LOWER cost per gallon of liquor filtered. Why not try DICALITE in your operations? Write for specific recommendations.

Try also DICALITE ABRASIVES and FILLERS for polishes, soaps, scouring powders and Dicalite IG2 as a Carrier for better Insecticides

FILTERAIDS
INSULATION
ADMIXTURE
ABSORBENTS
FILLERS

THE DICALITE COMPANY

520 N. Michigan Ave. CHICAGO
120 Wall Street NEW YORK
756 S. Broadway LOS ANGELES

A SUPERIOR QUALITY FILTERAID FOR EVERY FILTRATION NEED

FOR MEN ONLY

Hazel-Atlas presents Mascu-Line, a new line of bottles particularly designed for shaving lotions and other toiletries for men. Mascu-Line Bottles are simple and tailored in design, compact in shape, yet affording ample flat label space. They fit easily into traveling bags or bathroom cabinets. You can take your choice of two pouring openings: the regular kind, and (for concentrated products) a small opening for pouring small quantities of liquid. Mascu-Line Bottles are manufactured in four convenient sizes of 2, 3, 6 and 8-oz. capacity. Samples and further information on request.

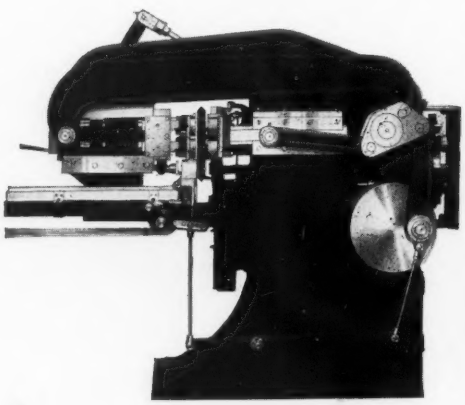
HAZEL-ATLAS GLASS COMPANY WHEELING, WEST VIRGINIA

All JONES PRESSES *are good*

. . . *But* there comes a time when even they, after ten or fifteen years gruelling labor, operating from 1 to 3 shifts daily,

are all in—no longer good

STRAINED, cracked and rusted, with shafts, bearings and plungers worn out of all form and accuracy, their operation costs more than it is worth. No human contrivance will last forever. Don't expect the impossible. Don't waste money trying *to repair* a machine that is *worn out* from driving shaft to offtake. It costs more to make such a machine work right, temporarily, than to install a new one, one that will last much longer than the old would though new and do a class of work never before attainable. Perfect pressing is the style in both laundry and toilet soaps. Though you have an old type press in good condition it would still pay you to install in its place a new model TOGGLE OPERATED PRESS, for greater economy, noiseless, nerve-saving operation, plus far better looking and more salable soap.



Type K Laundry Soap Press

R. A. JONES & COMPANY, Inc.

P. O. Box 485 **Cincinnati, Ohio**

The Standardized *Constant Motion Cartoner* packages, bottles, jars, tins, collapsible tubes and many other articles It feeds, folds and inserts direction sheets and corrugated board liners with the loads.

As the Editor sees it..

INQUIRIES from various small firms regarding the position of soap under the new Food, Drug and Cosmetic Law lead us to repeat here that soap is definitely excepted under the law. Soap, even fine toilet soap, is not a cosmetic. Its sole purpose as a soap is to cleanse the exterior of the body, whether the body be that of a human or some other animal. Only when a soap becomes the vehicle for a medicament or a cosmetic, and claims as such are made for it, does it fall within the jurisdiction of the new law. Otherwise, soap is still soap, just as it always was.

IF anybody has any doubts whatever as to where the average manufacturer stands in the matter of compulsory trade mark registration by states, he should have attended a meeting held recently at Albany, N. Y. under the auspices of the Committee on Trade Marks of the National Association of Secretaries of State. We are told that word went out among manufacturers that this was to be a hearing on the subject of compulsory trade mark registration. As a matter of fact, it had been planned as a meeting on uniform state trade mark law revision. Nevertheless, manufacturers from far and wide, including two representatives of the soap industry, swooped down on the meeting like a band of hornets,—and before they were finished, it is reported, had most of the secretaries of most of the states hanging on the ropes, and altogether on the defensive.

This spontaneous and forceful protest against compulsory state trade mark registration should leave an indelible impression. It demonstrated the bitter resentment of manufacturers against *any kind* of trade mark registration by states. That the states need the money thus collected, is obviously a weak answer, a political subterfuge. If any state needs money for strictly state expenses, those who should pay are those who live in the state. Haven't we had enough of this mounting list of retaliatory state laws and taxes already? With all due respect for state rights, as far as business and industry is concerned, the principle is being carried to the *n*th degree of assininity,—and we should like to see any single state which has gained more than it has lost in the scramble.

Trade marks are valuable assets of business. They should be something strictly within the purview of the U. S. Government,—not something which small-time politicians in local legislatures can hamstring at will, if they see fit. The resentment of manufacturers against state registration is a just resentment,—and is only a mild protest compared to the storm which we should like to see raised against this form of legalized blackjackery.

TOTAL sales of soap were larger for the first six months of 1938 than they were for the same period in any of the three preceding years. The figures for the first half of the current year were larger than those for the first half of 1937 by some two per cent. Inasmuch as business was supposed to be quite good during early 1937 and equally bad for the corresponding period this year, the increase in soap sales is both gratifying and puzzling. Possibly people had more time to wash themselves and their clothes while they were less busy at other things,—and used more soap in the washing. But, be that as it may, the fact that soap sales reversed the general business trend appears to indicate that soap consumption, and hence soap

manufacture, are influenced in a minimum by those factors which determine the ordinary course of good or bad business. During the past twenty years, activity in the soap industry has probably never at any time fluctuated more than twenty per cent either way from a mean average. That this is a condition which those employed in the industry should applaud, goes without saying.

ALTHOUGH more soap was sold during the first half of this year than last, soapers as a group made less profit this year. Again the old bugaboo of inventory values raises its ugly head. This time, the soaper who had little or no raw materials on hand was the lucky fellow. Other times, it is just the reverse, naturally depending on whether the market is rising or falling. All of which makes us wonder upon occasion if the small manufacturer who buys ten barrels at a time is on the whole so much worse off than the big soap maker who can never let his stocks run below the danger point, which point is usually sufficiently high to be interpreted in rather large sums if the market decides to go into a tail-spin. Some day the soap industry is going to make its profits from manufacturing soap, and not mostly from inventory calculations,—we hope.

NOT so long ago, we heard a purchasing agent describe his reactions to different types of salesmen who ventured to call upon him. Apparently his opinion of the average salesman is none too high,—for he cited example after example of salesmen who failed to come up to the level which he believed should be reached by a properly equipped sales representative. He pointed out that this one did not know his goods, another was sloppy, and still another had the wrong approach, or antagonized the buyer, and so on. All told, he quite successfully tore apart the average salesman and threw the pieces in the rubbish one by one.

As we sat listening, we wondered if all this stuff which is published about salesmen and selling,—how to sell, how not to sell, what is salesmanship and what isn't,—and all these opinions of buyers, really represent a true picture of the facts. To mind comes the picture of several salesmen whom we have known for many years, and who appear to violate all the rules laid down for what constitutes and up-and-coming successful salesman. And yet, these fellows, we know, command a volume of business far ahead of most of the selling fraternity who come closer to meeting the generally accepted pattern.

It makes us wonder if we are crazy, or if the people who write these books on salesmanship and who make speeches on the same subject, should be classified thus. We wonder if sometimes salesmen cannot be too good, too energetic, and too fine in appearance. Judging from results, at least a goodly number of buyers must like the dopey type of salesmen, the slow, easy-going fellow who doesn't make it too uncomfortable if you fail to give him an order. Maybe somebody should draw a new picture of what a salesman looks like,—and somebody should write a new book on the subject.

MORE than sixty-five per cent of all soap is used in industry, according to a statement credited to the Food and Drug Administration by a Washington correspondent. The other thirty-five per cent is used by humans. These figures are quite a surprise to us as we were of the opinion that it was just the other way around. As far as we can find out, something well over half of the total American soap consumption is household laundry soap in one form or another. Consumption of toilet soaps accounts for approximately twelve or fourteen per cent. With this in mind, we sort of had the idea that the consumption of soap by industry does not amount to more than twenty-five per cent of the total,—and that the household market by and large takes three out of every four pounds of soap made and sold.

The Office Building Market for CLEANING COMPOUNDS

A SINGLE product with a hundred different uses,—that is what the average buyer of soaps, cleaning compounds, and sanitary chemicals for office building maintenance would like. Presto! —and he has a product that will clean marble floors, tile, linoleum, granite, glass, woodwork, walls, ceilings, act as a deodorant in toilet and rest rooms, disinfect the urinals and clean the traps, wax the floors, burnish the chromium or aluminum fixtures, and shine up the bronze plate outside which bears his building's name. That's the kind of a product he would like, and some buyers are even fooled into believing it exists.

Of course, there are plenty of purchasing agents who have been properly trained for their jobs and know that there is no soap or sanitary maintenance product that will do everything, and that when it is offered, as it is most every day by salesmen peddling "all purpose" cleaners, then both it and the salesman are fakes. But, they are the buyers for the larger office buildings mostly, such as the Empire State, the Chrysler Building, Rockefeller Center, the Chanin Building, the Squibb Building, and others. But there are a far greater number of office building buyers who are lamentably uninformed and a sucker for glib-tongued salesmen and "versatile" cleaners, as one purchasing agent in this group called them. They are the purchasing agents usually for the smaller buildings, generally men who combine purchasing with other duties of a routine clerical nature, and whose background and experience has never been anything else but clerical work.

In this group also, are the buyers for groups of office buildings owned and operated by large realty management corporations. They appear to be especially unintelligent

and not overly conscientious in their buying. The chief reason for this is because their offices are located, usually, at some part of town far removed from the office where they do their purchasing. Consequently, they seldom see the products they buy being used, depending on building superintendents for recommendations and approval. As might be guessed, a system, or a lack of one, such as this, is subject to tremendous abuse. However, every buyer, the best informed as well as the least informed, is on the lookout for a cleanser or a sanitary product that will do a number of different jobs. The difference between the informed buyer and the one who is not in this respect is just that he is more discriminating.

Simplification of buying, was how one buyer for a large midtown building characterized his purchasing policy. On the wall above his desk as well as that of his assistant, hung a framed diploma certifying that he had been graduated from a school of professional engineering. "We employ 150 to 200 persons as cleaners in this building," he explained. "It is practically impossible to supervise the work of each one, and where a dozen products or so have been purchased, a cleaner for this and a cleaner for that, there is no way we can check to see if each cleaner is being used as it should be. Of course, after a long enough time doing a job the wrong way, the results show it and we can correct the condition, but by that time, it's often too late, for the damage has been done. Therefore, our purchases are confined to as few products as possible, and restricted to as simple a product as possible."

Another reason, he said, for restricting his purchases to as few products as possible was "because 90 per cent of the products offered today are frauds, and will not do what the salesman says they will do." Well, well! Here, we thought, is a subject on which there are undoubtedly several schools of thought, so we asked him to enlarge on it, if he would. He agreed, readily: "Perhaps 90 per cent is a slight exaggeration," he began, "but judging by the salesmen I have interviewed in my time as a buyer, and the extravagant claims they have made for their products, and the products themselves, I don't believe I am far wrong. Sure, we buyers want to purchase as few soaps and cleansers for the job as possible, but there are limitations. When a salesman comes in here and announces that he has a wonderful new general cleaner, one that will clean the woodwork, tile, marble, linoleum, etc., etc., *ad nauseam*, I get mad. I get mad, first, because I never did like a liar, and, second, because I don't like being taken for such a sap."

"There's no question," he continued, "about your being able to *use* the same product on both tile and linoleum, but after a short time it's going to play hob with your linoleum. Why didn't he tell me that, or make some reservations about the use of the product? I call that dishonest, and I say 90 per cent of the salesmen are like that." He continued: "Naturally, if I have several experiences like that with salesmen selling cleansers, I eventually become prejudiced against the whole tribe." We asked him if he thought the manufacturer, in the hypothetical case he had just related, was also dishonest, or only the salesman. "I suppose when you get right down to it," he replied, cooling off a little, "in a great many cases, salesmen aren't essentially so dishonest as over-enthusiastic. Either that, or they don't know anything about the product they sell. No, I wouldn't say that the average manufacturer is as much responsible for all the misrepresentation and misinformation that is floating about as is the jobber. He's the bird."

"The jobber," he went on, "puts the pressure on his salesmen and they resort to all sorts of wild claims in order to produce. Of course, the result is the manufacturer gets a black eye, and his reputation and that of his products suffer. My suggestion to the manufacturer, if he cares anything for his reputation, is to give more specific directions on the label of his package. Either that or arrange for the jobber to distribute more specific instructions for the use of the product, such as what it is best suited for, and how much to use. I think instructions should be particularly careful to caution against the use of too much of a product. Nearly everyone has a tendency to use too much. The result is the user becomes prejudiced because he is not getting the results he is entitled to, or the results the product when properly used can give him. I have sometimes felt that specific instructions are purposely omitted in order to mislead a less-informed buyer than myself. I suppose salesmen think I'm a tough nut. Well, if I am, it's their fault. I'm a prejudiced buyer and *caveat emptor*,—"Let the buyer beware,"—aptly expresses my philosophy."

THUS, having delivered himself on the subject of salesmen, jobbers, and other alleged ills affecting the trade, he proceeded to tell us something about the products he uses, and for what purposes. "We buy a high titre tallow base soap," he told us, "which is used for cleaning lacquered surfaces, painted surfaces, linoleum and marble. It comes in 300-pound barrels and has the form of macaroni or large spaghetti. The manufacturer calls it 'shredded soap'. To this soap is added modified soda as a booster." Although he wouldn't say what percentage of soda was used, we guessed it must be in the neighborhood of 50 per cent soap and 50 per cent soda, since his soda usage per year he told us, is nearly the same figure as that for soap. About four ounces of the combined soap and soda, he said, are used to a pail of water, which brings the total cost per pail to about one-fifth of a cent.

A tallow base soap, rather than a potash oil soap, was used, he explained, because it was cheaper. He pointed out that while some people say that a high titre tallow soap like the one he buys (he didn't know what the titre was,—just knew it was high), is less soluble, and, therefore,

less efficient in its detergent action, he had determined how much to use so that it was soluble without any loss of detergent action or strength, and four ounces to a pail of water was the answer.

For cleaning terrazzo floors, unpolished marble, tile, mosaic and stone, he said he purchased a detergent containing 85 per cent volcanic ash, five per cent soap, five per cent water softener and five per cent moisture. "The volcanic ash used in our detergent," he explained, "is softer than the general run of ash, and therefore doesn't have a harsh abrasiveness. Also the soap content is low, without being too low, in order to avoid leaving the marble surface slippery. In washing marble it is very important to dampen the surface before washing and afterward to rinse it thoroughly, since some of the product gets into the pores, accumulates, and eventually may cause chipping."

He said he also purchased an olive oil castile soap, which is used to wash lacquered marble walls and painted surfaces. "We also buy about 150 gallons a year of a coal-tar disinfectant with a phenol coefficient of 18," he added. "This is used on the garbage cans and rubbish receptacles." He said that he did not purchase deodorants of any kind. "If you keep everything clean, you don't need deodorants," he argued. "You only use those to kid the public. Our toilets and rest rooms are given a thorough cleaning each day. The urinal traps and toilet bowls are scoured with a special bowl cleaner, and the porcelain cleaned with our volcanic ash detergent. Stains are removed, if there are any, with a solution of trisodium phosphate and chlorinated lime."

The building does not buy furniture polish, he said. Approximately 400 gallons of a "white" metal polish are purchased a year. "Then we purchase about 400 gallons of a water emulsion wax a year, for use on rubber mats and rubber composition surfaces, and about the same amount of paste wax for use on linoleum, and I guess that about winds up the list of products we buy to keep this place clean and bright." We then asked about costs. "Well, we try to keep a close check on everything," he said, and showed us a monthly operating expense sheet giving the value of wages and materials for upkeep and maintenance, calculated on a square foot of rentable area. "If the building is occupied up to 95 per cent of the available rentable space one month, and the next month it drops down to 90 per cent, the cost of sanitation and cleanliness maintenance goes up. You still spend the same amount of money on clean up, but your production,—occupancy figure,—has fallen to 90 per cent. The corridors, rest rooms, entrances, etc., must be kept clean whether the building is partially filled or not. In the course of a year, I would say that our maintenance costs average about 18c per square foot of rentable area." Based on that figure, an estimate of the building's total annual expenditure of materials for cleanliness and sanitation maintenance, including mops, buffing machines, etc., as well as soaps and sanitary chemicals, comes to something like $10,000 a year, or a little higher.

THE next stop was made at an office building somewhat further uptown on Fifth Avenue. It is a comparatively new building and is immaculately kept. The rentable area is approximately 400,-

The beautiful lobby of the Empire State Building, New York, presents a wide variation in cleaning problems,—not to mention the other 107 floors in the building.

000 square feet, somewhat smaller by comparison with many other office buildings in New York, but one which should be representative of the latest in equipment and maintenance methods. Here the buyer informed us that his purchases of soaps and sanitary chemicals consisted of the following: a 65 per cent coconut oil base soap, or any neutral oil soap except one with a linseed oil base, used for cleaning linoleum, highly polished marble, lacquered and painted surfaces; a general detergent containing trisodium phosphate and borax, used for cleaning tile, terrazzo, and travetine; a volcanic ash product, used for cleaning unpolished marble; muriatic acid, applied and followed by a weak solution of soap for cleaning exterior marble; hypochlorite solution, with a phenol coefficient of 8, as a disinfectant; a liquid cleanser, described as a pipe solvent and bowl cleaner for urinals and toilets; a brass polish; oxalic acid, used for cleaning grill work and hand rails; and a water emulsion wax.

When asked why he preferred a neutral oil soap with a base of any vegetable oil but linseed, he said it was because he had found that a linseed oil soap had a tendency to deposit an excess of oil on surfaces and did not rinse well. This was especially undesirable, he said, when applied to polished marble, which must be thoroughly rinsed and kept from becoming slippery. He added that he had at one time used a tallow base soap, but was forced to discontinue its use because it formed a scum and discolored the marble. Also, he said, that while it had been cheaper in price than a neutral oil soap, it had actually been more expensive in the end. "The employes using it," he explained, "will in spite of close supervision use more than is necessary, it won't all dissolve, and the result is often trouble with clogged drain pipes."

"As you can see," he told us, "our biggest problem here is marble. Marble requires a lot of care. Not only must it be kept clean, but it must be kept clean the right way or it is liable to chip and discolor. For example, the volcanic ash detergent which we are using at present is the only one I'd think of using. I've tried a number of products and it is the only one that has proven satisfactory. It contains 90 per cent volcanic ash and the rest soap and moisture. We had been using a product that contained water softener, and had trouble. Marble is very porous and no matter how thoroughly you rinse it after washing, the alkali in that water softener is going to accumulate in the pores. In time it will build up and cause the surface to crack. I tried to tell the salesman that, but he said no, it would do a better job of cleansing with the softener. Well, I've switched to a product that doesn't contain a water softener and I've eliminated the chipping. Besides that, you don't need a water softener around New York."

His mention of a salesman,—and also one who had tried to influence him in a way which as it turned out had been contrary to his best interests,—reminded us of the buyer who had castigated all salesmen and their products, naming them frauds, so we brought up that subject again. "A salesman has to live the same as everyone else," was the gist of his reply. "Listen, when a salesman comes in here to see me I know he didn't come for tea. He is out to sell me if he can. If he has something I want I'm going to buy it. If not, I say so. If a salesman deliberately misrepresents his product, I know it but very few of them ever do, at least not to me. No, let all the salesmen that want to come in here. One of them may have just the thing I'm looking for, and I can't afford not to know about it. As for a lot of products being frauds, let's say instead that there are both good ones and bad ones, and as far as I'm concerned there are enough good ones so that I'm not going to get my blood pressure up about the others."

A number of other buildings were visited, but since a detailed account of each would be repetitious, only a general summary is necessary. One different than the usual type of buyer was encountered in a large building near Fifth Avenue, in the person of a woman purchasing agent. Unfortunately, not a great deal of information could be obtained from her due to the fact that she was somewhat hard of hearing, and kept insisting that she was not seeing salesmen at that hour. (We might have added, and you're not hearing any either, lady!) What a handicap to a salesman she must present! And she buys for two buildings, totaling 90 stories!

Among the smaller office buildings, say, up to about 15 stories, the most widely used type of cleaning compound is ordinary soap powder, containing about 20 per cent soap, and 30 per cent soda ash, with the remainder modified soda and moisture. Usually it is used indiscriminately despite its limitations for some uses. Soap powder, plus a small quantity of disinfectant, usually pine and a metal polish, comprise the average small building's purchases of sanitary chemicals. Of course, the standard of cleanliness maintenance in a small building varies with its location, but it is pretty accurately estimated that the cost of sanitary chemicals amounts to about $250 to $300 a year.

The large office building usually uses three types of cleaners: a neutral soap, used for painted surfaces, linoleum and highly polished marble a soap powder, used in corridors, wash rooms, etc.; and a detergent for unpolished marble, tile mosaic, terrazzo, travetine, and porcelain. It buys very little in the way of deodorants, and is a comparatively heavy buyer, in comparison, that is, with the quantities of other products purchased, of floor waxes and metal polishes. From the best figures we have been able to obtain during this investigation, the average large office building in New York spends from $00.003 to $00.005 per square foot of rentable space a year for cleaning materials and sanitary chemicals.

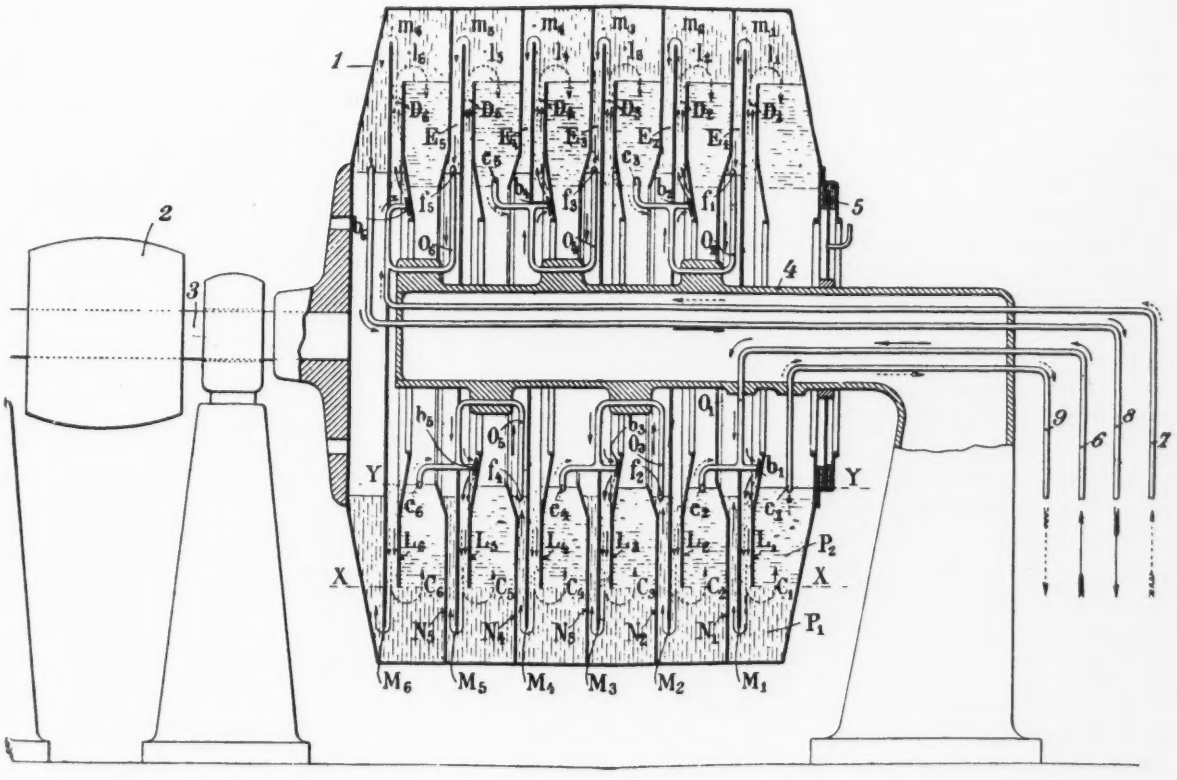
Continuous Oil Refining

By Paul D. Boone

WHETHER rapid continuous processes for the refining of fatty oils have any great economic significance today as far as the soap industry is concerned, is a moot question. As in the manufacture of soap, the great mass of oil refining operations are still carried out by the batch method. Were soap manufacturing a widely used continuous process, then there is no doubt but that the continuous refining of oils would form a very logical step in an unbroken line from crude oil to finished soap. But as long as soap is manufactured in kettles, of what economy is it to refine the raw material on a continuous production line? As far as food oils are concerned, the situation is slightly different. However, the main concern here represents oils for the soap kettle and certain methods of treating them which are not at all applicable to food oils or fats.

The refining of fatty oils continuously for the soap kettle appears to have possibilities which may eventually take on greater economic importance than they have at the present time. Sulfuric acid refining of soap oils has been used successfully in some instances and it seems that only defects in the method have prevented its more general application. In refining oils by sulfuric acid methods, some of the defects now common in oil refining might be eliminated. The use of sulfuric acid necessitates a completely different technique in which continuous processes can play an important part. The discussion here will be confined to acid refining which methods naturally are only applicable to technical oils and fats.

The term "rapid" is of course relative but wherever the time for any process is a small fraction of that usually required, it may be so styled. There are instances where the objective is not however simply alone to avoid the inability to reuse tanks and other equipment because the contents must settle or react for periods extending over hours. Long contact sometimes means also undesired re-



Equipment designed in England,—counter-current centrifugal process where the refining liquid is of different specific gravity. British Patent No. 414,558.

actions. So it is with sulfuric acid refining of oils. One finds in many of the texts a category of disadvantages of sulfuric refining of glyceride oils and fats by the conventional batch system operation. Sulfuric acid refining of oils for soap making and lubricants has been employed. Since the free fatty acids normally present need not be removed when the oil is for soap manufacture as is the case with oils for food purposes, the use of this reagent would be much extended, if the industry were conversant with methods which obviated the disadvantages. There is no method, no process which is ideal. But a method must be capable of giving a good commercial product. So, in giving a passing view the rapid methods of sulfuric acid refining, the author is not espousing the role of advocate of any particular one or of the method as a whole.

Both Ubbelohde[1] and Andes[2] describe a process devised and worked out by Dr. Eckenburg. This method makes use of emulsifiers and separators. Eckenburg's method consists in passing fatty oils continuously through a system of emulsifiers and separators, in this manner subjecting them to the acid as well as performing the necessary washings. The emulsion passes from the emulsifier direct to a separator, the "reaction between the liquid or dissolved purifying agent and the impurities to be removed from the oil occurring without delay by reason of the intimate contact produced."

The liquids are then transferred from one element to another by means of centrifugal pumps driven from the shaft of the emulsifier or separator. The plates of the emulsifier and drums of the separator are made of acid resisting steel capable of resisting concentrated sulfuric acid. For dilute acids, bronze plates are used. In the ordinary mode, he uses three washing elements. The sulfuric acid is mixed and removed in the first, the second serves for the cold water and the third for the washing with warm water. Dr. Eckenburg stresses the continuity of the operations and the fact that the refining is carried on uninterruptedly. A Florentine flask may replace the centrifuge. In summing up the advantages afforded by an Eckenburg battery he lists: (1) The crude oil may be treated direct as it comes from the press or it can, if considered advantageous, first be emulsified with water, for the removal of cellular tissue, etc. (2) Some 40 to 60 per cent less fat is saponified than by the ordinary method; the product is consequently less acid. (3) The separator removes the sulfuric acid until not more than 0.2 per cent is present, a result otherwise only attainable by several days standing. (4) The residual acid is completely removed by a single washing or two at most. (5) The yield of purified oil is as a rule greater than from the old process.

It seems proper to give brief mention here to two forms of centrifugal mixing apparatus for sulfuric acid refining. Voigt[3] provides within an iron cylinder equipped with a cover a rotating cone open at top and bottom. Its upper diameter is somewhat over one meter while the under width is 25 cm; the height is 70 cm. With a satisfactory swiftness the oil rises within the cone and is ejected through the openings in the side of this sieve like cylinder. The reagent comes into the stationary cylinder as a fine rain through holes in the under side of a ring-shaped pipe. It mixes with the oil in the course of being sprayed out with the oil through the sieve like cone, forming a milky emulsion. About 300 kg of oil can be mixed with sulfuric acid in ten minutes. On the bottom of the outer cylinder, there is a draw-off through which the mixture is taken off. Although the stationary cylinder is equipped with a jacket, this is characterized as mostly unnecessary.

In a similar way E. Petit[4] sought to achieve the mixing of oil and acid. In a cylinder, plates were arranged on a vertical axis, one above the other. Into the upper plate of such a pair, sulfuric acid was flowed and upon the rotation of the axis, both fluids were flung in thin layers against the cylinder walls and mixed thereby intimately.

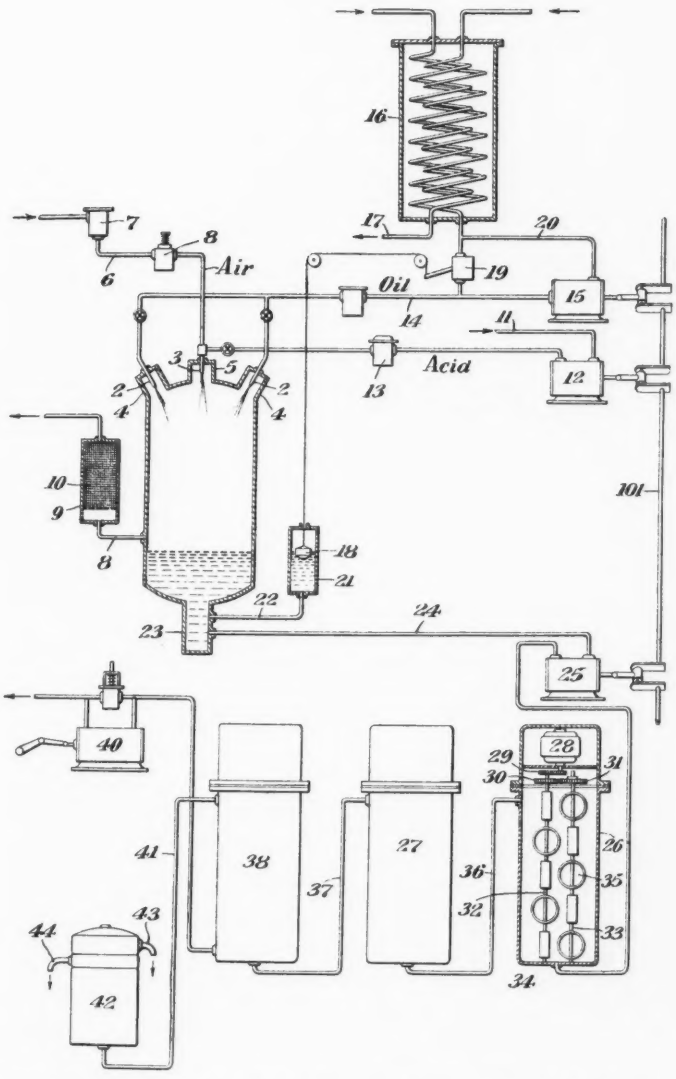
It certainly is not amiss to call attention to the fact that the well known Babcock[5] method of determining fat in butter is for all purposes on a small scale a rapid sulfuric acid refining. The principle is based on the fact that when sulfuric acid is added to butter or cream, the acid breaks down the non-fatty constituents without materially affecting the fat. The action of the acid together with the heat generated, destroys the emulsion of fat in the serum, causing the fat to separate out. The complete separation is facilitated by subjecting the mixture of acid and fat body to centrifugal force. In the actual test the sulfuric acid diluted with water is added in three installments to the butter or cream and mixed therewith after each addition by giving the bottles a rotary motion until the curd is completely dissolved. The test bottles are then set into the centrifuge which is whirled about five minutes. When the test is made properly, the column of fat is clear, transparent and has a golden color. The conditions are so strictly controlled that the fat has not suffered a loss.

The Shaw[6] analytical method for fat analysis in butter is somewhat similar to the Babcock method except that after centrifuging one minute, the acid solution is drawn off and this addition and separation is repeated four times. The fat alone is left, the impurities having been removed by the acid. During the centrifuging, the centrifuge is kept warm just as is done in the Babcock method.

Grant[7] brought an oil such as cottonseed oil into diffused contact with acid within a vacuum retort by using steam or simply by employing force pumps. In the detailed embodiment, sulfuric acid and oil are drawn up by the steam in the form of jets, and are thoroughly mixed, and forced out of the retort, through a long neck at the other end into a condenser or cooler formed of pipes. Then the mixture goes to a tank where the aqueous layer is allowed to separate. The oil flows off to a tank containing an alkali. The retort is heated by various means as superheated steam.

Two of the more recent U. S. patents taken out by two Frenchmen,

Jean Adolphi Schaeffer and George Pfersch[8], disclose a continuous process of refining mineral and vegetable oils which is completed in about ten minutes. It is pointed out that prior processes, meaning batch processes, are uneconomical entailing loss of both oil and acid,—a fact only too well known. Their own mode goes to the root of this defect. The oil is introduced into a closed cylindrical chamber through oil atomizers whereby it is dispersed in the form of a cloud or mist of very finely divided droplets, and the acid is similarly introduced engaging it. Air may or may not be used for this. Oil is passed through heat control means before being pumped. From the lower part of the chamber the liquid passes by a pipe to another chamber. From here it may pass to a chamber designated an insolubilizing chamber to which water is also supplied. The mixture passes to a centrifuge running at high speed. In the sole specific example illustrative, a lubricating oil of 400 Saybolt is selected. Nine gallons of oil to 0.2 gallons of 96 per cent H_2SO_4 per minute is the rate of flow; and in the insolubilizing chamber where it may pass, water is added, at the rate of 0.06 kg. per minute. Sufficient interval of time is afforded for the reaction between the sulfuric acid and the products to be removed. Gravitational separation in the tanks is prevented by ring agitators. The mixture is sent to a centrifuge running at the rate of 14,000 r.p.m. The patent specification gives as ranges of acid strengths applicable from 10-100 per cent or even fuming sulfuric and temperatures from 30° F. to 160° F. There is stressed the importance of rapidly separating the impurities from the treated oil. To this end use is made of a centrifuge or submission of the treated liquid to shock.



Apparatus devised by Jean Schaeffer and George Pfersch for their continuous vegetable oil refining process.

In 1871, Robert Scott[9] patented in England a continuous process of refining mineral and other oils. Acid and oil are led in suitable proportions by a funnel or pipe, entering at, or dipping down to the bottom of the vessel. The mixture rising in the first, overflows thence by a pipe leading to the bottom of the second vessel. Each vessel has working in it a revolving or other suitable agitator to insure the thorough mixing of the acid and oil. By valves or other means attached to the first vessel, the proportions and rates of flow may be regulated. In one embodiment, the acid mixture goes to depositing compartments overflowing from each compartment to the next in succession.

Paul Marix[10] worked out the idea of washing fatty substances "of animal, vegetable or mineral origin" with water or acids using concentric cylinders. The inner cylinder is open at the bottom and the outer one closed. The two cylinders have diaphragms which project alternately between one another so liquids can circulate in a zig-zag path. The inner cylinder is set in rotation and the aqueous fluid caused to descend to the bottom of the inner vessel. When the circumferences of the diaphragms of the inner cylinder are covered with this acid, the oil to be washed is run in. The latter under the action of the centrifugal force traverses from the bottom upward in zig-zags, passing through all the successive layers of acid which owing to their greater density remain imprisoned between

(*Turn to Page* 70)

pH—Its Meaning and Use

Practical application and determination in soap and detergent practice . . . last of a series of three articles

By Dr. C. A. Tyler

COLORIMETRIC methods of determining pH depend on the fact that certain organic compounds in solution change color gradually over a definite pH range. These substances are called indicators and they behave as though they were weak acids or bases, in which an equilibrium exists during the color change between the undissociated form of pseudo acid or base and a dissociated or iogenic form. The latter is believed to result from a change in constitution,—a tautomeric change. The particular pH range and color change are characteristic for each individual indicator and may be at an acid, neutral or alkaline pH, and may be from colorless to colored or from one color to another. The transition interval during which the color gradually changes usually covers a pH range of about two units. E. g. phenolphthalein is colorless at an acid pH but at 8.2 times pink and this color deepens to a maximum intensity of red at about pH 10. The transition interval for methyl orange is 3.1 to 4.4; below 3.1 the color is red, above 4.4 the color is orange-yellow, and in between a gradual change from red to orange takes place. The first sign of change is useful in making titrations, but the transition interval is useful in determining pH.

In order to obtain solutions of known pH, it is customary to prepare buffer mixtures to cover the pH range in which one wishes to work. As with the indicators, the usefulness of a buffer solution is limited to a definite pH range. By varying the proportions of the two ingredients of the buffer mixture, it is possible to make a series of solutions, each differing from the next by a definite pH interval. By adding a small amount of a suitable indicator to each of these, a series of colored solutions may be prepared differing in color or color intensity, each of which corresponds to a known pH value. The same indicator is then added to the unknown solution for comparison with the series of standards. The pH of the standard tube whose color it approaches most nearly is taken as that of the sample. Another but less common procedure is also used and will be taken up later.

Colorimetric methods of determining pH are widely used in industry because of their simplicity, the rapidity with which they can be applied once the necessary solutions have been prepared, and the fact that no expensive apparatus is required. The necessary indicator solutions and buffer solutions can be purchased if desired. Properly applied, colorimetric methods may be made accurate to 0.1 pH.

Sources of Error

A GREAT disadvantage of colorimetric methods of determining pH is that they are subject to various and sundry sources of error. Too many times these are overlooked, with the result that values may be reported supposedly accurate to 0.2 pH, when they may actually be a whole pH unit off. The accuracy with which values can be reproduced has nothing to do with the general accuracy of the method when sources of error are ignored.

Dilution.[1]—Heavily buffered solutions may be diluted within reasonable limits without affecting the pH. Slightly buffered solutions may undergo a relatively large change in pH with dilution. This means that an unknown solution should be examined at the same concentration as when sampled. Dilution to reduce color or turbidity may change the pH.

Effect of carbon dioxide.—An alkaline solution, particularly one which is to be kept for some time, should be well protected from the air or it will absorb carbon dioxide, which thus gradually reduces the alkalinity.

Storage in glass.—Standard solutions should be stored in hard glass. Water tends to dissolve sodium oxide from glass, particularly soft glass.

Salt error.[2]—Neutral salts may affect the color of an indicator, that of the acid-sensitive indicators being shifted toward the alkaline side, that of the basic-sensitive indicators toward the acid side. The explanation for this is not known. The salt error appears to be proportional to the concentration of salt. In general the error is negligible when the salt concentration is less than 0.2 N (a 0.2 *N* solution of sodium chloride corresponds to about 1.2 per cent). The

error with phenolphthalein in the presence of 10 per cent of sodium chloride was found to be 0.10 pH, for a 4 per cent solution 0.04, the observed colorimetric value being too high. If the pH of a solution is found to be 8.9 with phenolphthalein in the presence of a salt concentration of 10 per cent, the true value is 8.8.

Buffers themselves cause a salt error with some indicators. This error is not necessarily in the same direction as that from neutral salts. McBain[3] demonstrated this by determining the pH of pure sodium hydroxide solution and alkaline buffer solutions, both electrometrically with the hydrogen electrode, and colorimetrically. Of 20 indicators tested, only Alizarin yellow G, Tropeolin O and thymol violet gave the same color at 18° C. with sodium hydroxide solution and a buffer of identical alkalinity. The buffers used were glycine-sodium hydroxide, and borax-boric acid. With thymol blue, the observed alkalinity was 1.19 pH units too low, with *o*-cresol phthalein, 1.0, with methyl thymol blue 0.7, with phenolthymol phthalein 0.5, and with phenolphthalein 1.5 units too low. Phenolphthalein was used with the borate-boric acid buffer.

Colored or turbid solutions.[1] —colorimetric methods cannot be entirely satisfactory when applied to colored or turbid solutions, as the color of the sample will interfere with the color of the indicator. Attempts have been made to overcome the difficulty by placing a tube of sample solution without indicator behind the standard, and reading the color of the two tubes against that of the sample containing the indicator plus a tube of distilled water. The same thing has been done with turbid solutions. The method has been applied with reasonable success when the color or turbidity was not too great.

Dichromatism. — Some solutions when examined through one thickness appear to have one color, but when examined through another thickness appear to have a different color. Bromophenol blue and bromocresol purple exhibit dichromatism. This type of error emphasizes the need for using tubes of the same bore for samples and standards. The balancing method in which the depths of solutions compared are varied, cannot be applied to dichromatic solutions.

Protein error.—Proteins are colloidal, but what appears to be at least as important is their amphoteric nature,—their ability to react both as an acid and a base. Slow combinations occur between proteins and some indicators, as demonstrated by Sorensen.[2] Most azo dyes and Congo red are useless in this case. The phthaleins cannot be used if undecomposed proteins are present, but may be used if only the decomposition products are present.

Colloid error.—Certain indicators are not suitable with colloids such as soap. In such cases it is probable that the colloids preferentially adsorb one form or the other of the indicator. Mosher[4] determined the effect of one per cent solutions of neutral textile soaps on seven indicators by comparison with the electrometric pH. He found that Nitro yellow, LaMotte purple, and Alizarin yellow R gave the same pH as the hydrogen electrode, but that thymol blue, phenolphthalein, cresol phthalein and thymol phthalein gave colorimetric readings too low by 0.5 to 1.5 units, in the presence of one per cent of soap, varying the particular indicator. The error with phenolphthalein was 0.6-0.7 unit, and with thymol lue 1-1.4 units. Hartley[5] reported the effect of colloids such as sodium cetyl sulfonate on several indicators. The colloids had little effect on the pH of buffer solutions, but the adsorptive effect on indicators in some cases reached an apparent shift of 1.5 pH. Congo red could not be used. Indicators not affected by sodium cetyl sulfonate were methyl orange, pH 3.5, *p*-nitrophenol 6.5, acid fuchsine No. 692, 7.0, Orange II 151, 8.0, bromophenol blue 3.5, phenol red 7.5, bromothymol blue 6.5, thymol blue 8.5, and phenolphthalein pH 9.0. The simpler the constitution of an indicator, the less subject it seems to be to error.

Jones and Smith[6] determined colorimetric errors with such colloids as commercial Igepon T, Prestabit Oil (a highly sulfonated oil), Brilliant Avirols, Gardinols, Lanaclarin etc. The values found by the colorimetric methods were usually too low as compared with electrometric determinations. Solutions containing 0.5 per cent of textile assistant gave errors in pH from 0.2 to 1 unit. Concentrations as low as 0.1 per cent gave appreciable errors with bromothymol blue and thymol blue. A method was devised whereby these same products could be determined colorimetrically with an accuracy of 0.1 unit.

The method consisted of dialyzing the solution of textile assistant. Distilled water was put in a glass tube 2.5 cms. in diameter and 12 cms. long. A sheet of No. 500 plain, transparent cellophane was then fastened over the end of the tube by means of a rubber band. The tube was placed, membrane down, in a beaker containing about 200 cc. of the colloid solution. The tube was adjusted to a height so that the level of the liquid inside the tube was the same as that of the liquid outside. After a suitable interval the pH of the solution in the cell was determined colorimetrically. Except for Brilliant Avirol L-144, Brilliant Avirol L-142, and Gardinol CA, the solutions reached the correct Ph value in an hour. The others took three hours. If left longer than three hours, the textile assistant began to dialize through. Bromocresol green, pH 3.8-5.4, bromothymol blue 6.0-7.6, and thymol blue 8.0-9.6, were used successfully with the dialyzed solutions. Dialysis was unsuccessful with Prestabit Oil only.

From the above it may be seen that colloid error with indicators is specific. When sample solutions contain colloids whose effect on indicators is not definitely known, colorimetric methods should not be applied until they have been checked with electrometric methods.

Temperature error.[2]—The temperature effect on indicators is specific, e. g., the temperature coefficient for phenolpthalein is 0.011 pH per degree, and the correction is

subtracted at temperatures above 18° C. For salicyl yellow the coefficient is 0.013, and the correction is subtracted at temperatures above 20° C. The general practice is to compare sample and standards at room temperature, so that the temperatures of the two are the same. Some types of solutions have a relatively large temperature coefficient, so that it is good practice to standardize on making determinations as near as possible to 25° C.

Concentration of indicator.—Color usually varies with the concentration of the indicator. The most satisfactory concentration is the smallest concentration that will give maximum color to the solution. This varies with the indicators, as some possess much more tinctorial power than others. The amount of indicator used should be accurately measured and should be the same in the sample and the standard. If sufficient care is taken, the indicator can be measured in drops when very small quantities are needed.

Comparison with Indicator Solutions

IN making pH determinations on sample solutions, frequently one knows something about the degree of acidity or alkalinity of the solution, so that it is possible to proceed directly to the choice of proper buffers and indicators. If the nature of the sample is unknown, it is convenient to use a universal indicator made up of a mixture of indicators, for establishing the approximate pH of the solution. Several universal indicators have been proposed and several already made up are on the market. The following has been found useful in pulp and paper mills and its accuracy confirmed with the type of solutions found there, by comparing results with the glass electrode with those determined colorimetrically, both in the presence and absence of buffers.[7] Dissolve 0.005 gram of thymol blue, 0.0125 gram of methyl red, 0.050 gram of bromothymol blue, and 0.100 gram of phenolphthalein in 100 cc. of neutralized 95 per cent ethyl alcohol. Neutralize with 0.05 *N* sodium hydroxide solution and dilute with water to 200 cc. Add 0.5 cc. of the indicator to 5 cc. of sample solution and compare with the series of standards made by adding 0.5 cc. of indicator to 5 cc. of suitable buffer solutions. The resulting colors are as follows:

Color	*pH*
Red	4.0
Orange	5.0
Yellow	6.0
Light green	7.0
Very dark green	8.0
Indigo blue	9.0
Violet	10.0

When used in bleach solution, the colors fade rapidly, but a rough estimation of pH can be made by a quick comparison as soon as the indicator has been added to the sample solution.

A buffer covering an unusually wide range in the acid region consists of suitable mixtures of 0.2 *M* disodium phosphate solution (35.61 grams $Na_2HPO_4,2H_2O$ per liter) and 0.1 *M* citric acid solution (21.01 grams $C_6H_8O_7,H_2O$ per liter), as follows:[8]

pH	0.2 M $Na_2HPO_4,2H_2O$	0.1 M Citric acid
	cc.	cc.
2.2	0.40	19.60
2.4	1.24	18.76
2.6	2.18	17.82
2.8	3.17	16.83
3.0	4.11	15.89
3.2	4.94	15.06
3.4	5.70	14.30
3.6	6.44	13.56
3.8	7.10	12.90
4.0	7.71	12.29
4.2	8.28	11.72
4.4	8.82	11.18
4.6	9.35	10.65
4.8	9.86	10.14
5.0	10.30	9.70
5.2	10.72	9.28
5.4	11.15	8.85
5.6	11.60	8.40
5.8	12.09	7.91
6.0	12.63	7.37
6.2	13.22	6.78
6.4	13.85	6.15
6.6	14.55	5.45
6.8	15.45	4.55
7.0	16.47	3.53
7.2	17.39	2.61
7.4	18.17	1.83
7.6	18.73	1.27
7.8	19.15	0.85
8.0	19.45	0.55

The purest reagent grade of chemicals should be used in making up buffer solutions. Buffer action is stronger near the middle of the series than at the extreme ends. By selecting the proper proportions from the list, buffer mixtures can be prepared for use with the universal indicator from pH 4 to 8. The buffer can also be used for final determinations of pH by preparing solutions representing pH intervals of 0.2 unit for use with single indicators in their particular pH range. The pH of the buffer solutions was originally determined with the hydrogen electrode. Clark lists many standard buffers and many indicators.[8]

A buffer solution which extends further into the alkaline range than most buffers, is made by mixing in the proper proportion a solution containing 7.505 grams of glycine and 5.85 grams of sodium chloride per liter, with a solution of exactly 0.1 *N* carbonate-free sodium hydroxide. Preparation of the latter is described by Clark.[8] The buffer is really a mixture of the amino acid, glycine, with its sodium salt.

pH at 25°C.	Glycine-NaCl	NaOH
	cc.	cc.
8.43	9.5	0.5
8.77	9.0	1.0
9.20	8.0	2.0
9.54	7.0	3.0
9.96	6.0	4.0
10.30	5.5	4.5
10.88	5.1	4.9
11.12	5.0	5.0
11.36	4.9	5.1
11.89	4.5	5.5
12.18	4.0	6.0
12.45	3.0	7.0
12.63	2.0	8.0
12.74	1.0	9.0

By interpolation this buffer can be used to give the pH values in the upper region of the universal indicator, or with the proper single indicator, more accurate values may be obtained.

A boric acid-borate mixture covers a series of pH values overlapping the two already given.[8] One solution contains 12.37 grams of boric acid and 14.91 grams of potassium chloride per liter. The other is an exactly 0.2 *N* solution of sodium hydroxide free from carbon dioxide.

pH	H_3BO_3-KCl	NaOH	Dilute
	cc.	cc.	to cc.
7.8	50	2.65	200
8.0	50	4.00	200
8.2	50	5.90	200
8.4	50	8.55	200
8.6	50	12.00	200
8.8	50	16.40	200
9.0	50	21.40	200
9.2	50	26.70	200
9.4	50	32.00	200
9.6	50	36.85	200
9.8	50	40.80	200
10.0	50	43.90	200

An indicator which may be used for extending rough pH determinations into the strongly alkaline region is thymol violet, a mixture of one part of Tropaeolin O with four parts of thymol phthalein.[9] This indicator may also be used over a somewhat narrower range for accurate estimation of pH with buffer solutions adjusted to small pH intervals. The indicator is prepared as a 0.1 per cent solution in 20 per cent alcohol. Three drops of it are added to 10 cc. of the buffer standards or to 10 cc. of sample solution.

pH	Color of thymol violet
9	yellow
10	yellow-green
10.5	blue-green
11	blue
12	indigo
13	violet

McBain recommended thymol violet for use in alkaline solution, and also Alizarin yellow G and Tropeolin O. Alizarin yellow G may be used for a pH range of about 10-12, changing from pale yellow to deep yellow. McBain used a 0.01 per cent aqueous solution and added 10 drops to 10 cc. of standard or sample solution. Tropeolin O is useful at about pH 11 to 13, changing from yellow to orange-brown. A 0.1 per cent aqueous solution of the indicator is used, and 5 to 10 drops added to 10 cc. of standard or sample solution.

Phenolphthalein and thymol blue are the indicators most used in the less alkaline range. Phenolphthalein changing from pink to red over the pH range of 8.4 to 10.0 and thymol blue changing from yellow to blue over the pH range of 8.0 to 9.6. Phenolphthalein has been used at various concentrations, one being 0.05 gram in 100 cc. of 50 per cent alcohol. McBain used a 0.1 per cent solution in alcohol, and added 1 cc. of this to 10 cc. of buffer solution. In the case of thymol blue, 0.1 gram of indicator is dissolved in 21.5 cc. of 0.01 *N* sodium hydroxide solution, and this is diluted to 250 cc. with water to give a 0.04 per cent solution of indicator. Both phenolphthalein and thymol blue are subject to salt error, so that it may be necessary to apply a correction in using these indicators.

Many overlapping buffers and indicators are available for the ordinary acid and alkaline ranges of pH. If one wishes to work at a pH much higher than 12, Kolthoff and Furman[2] recommend dilution of 0.1 or 1.0 *N* sodium hydroxide solution with carbonate-free water. Such a solution, being unbuffered, would need to be carefully protected from contamination with carbon dioxide. Roberts used 1, 3, 6-trinitrobenzene as indicator for the colorimetric determination of pH at 12-14.[10]

Although Clark, and Kolthoff and Furman list some 17 or 18 standard buffer mixtures, only one more will be given here. This can be prepared without the use of standard alkali. It is made by mixing the proper proportions of a solution containing 0.1 *M* monopotassium phosphate (1362 grams KH_2PO_4 per liter), with a solution of 0.05 *M* borax (19.1 grams of $Na_2B_4O_7.10H_2O$ per liter).

pH	KH_2PO_4 cc.	$Na_2B_4O_7.10H_2O$ cc.
5.8	9.21	0.79
6.0	8.77	1.23
6.2	8.30	1.70
6.4	7.78	2.22
6.6	7.22	2.78
6.8	6.67	3.33
7.0	6.23	3.77
7.2	5.81	4.19
7.4	5.50	4.50
7.6	5.17	4.83
7.8	4.92	5.08
8.0	4.65	5.35
8.2	4.30	5.70
8.4	3.87	6.13
8.6	3.40	6.60
8.8	2.76	7.24
9.0	1.75	8.25
9.2	0.50	9.50

The indicator or indicators to be chosen for a special field of work are limited to the pH range of the solutions under examination. Of the suitable indicators for this range, one may involve less inherent error than another. Since indicator errors are specific, it is impossible to generalize. The fundamental method of checking is against electrometric measurement. Another method is to use an indicator in solutions of two different buffers of the same pH. If the color is the same in each, then the buffers should be all right to use with that particular indicator, as it is improbable that they would both give exactly the same error. A second indicator should be checked in the same way. The two indicators can then be used to check each other with the sample solution, to see whether substances present in the unknown solution cause an error.

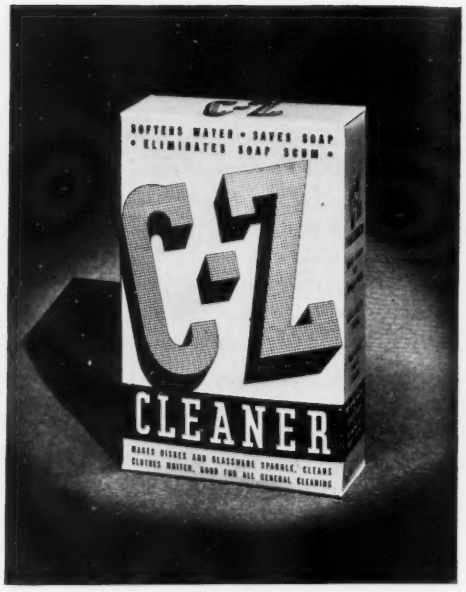
The second method for the colorimetric determination of pH does not require the use of buffer solutions. Instead, the acid color of the indicator is developed in one solution or series of solutions, and the basic color of the indicator developed in a separate solution or series of solutions. The color is then read through two tubes, one behind the other, one being the acid color, the other the basic color of the indicator. The application of this method will be illustrated with the use of thymol blue, pH 7.85-9.75. To prepare the indicator solution, dissolve 0.02 grams of thymol blue in 4.76 cc. of 0.01 *N* sodium hydroxide solution and dilute with water to 250 cc.[1] Dissolve 7.0 grams of monopotassium phosphate, KH_2PO_4, in water and dilute to one liter for use as an acid buffer. Dissolve 1.0 gram of anhydrous sodium carbonate, Na_2CO_3, in water and dilute to one liter for use as an alkaline buffer. Two sets of tubes are then prepared, the correct one from each set being used to give the pH indicated in the table.

	Acid tube		Basic tube	
	Thymol blue	KH_2PO_4	Thymol blue	Na_2CO_3
pH	cc.	cc.	cc.	cc.
7.85	0.10	10.90	0.90	10.10
8.05	0.15	10.85	0.85	10.15
8.2	0.20	10.80	0.80	10.20
8.4	0.30	10.70	0.70	10.30
8.6	0.40	10.60	0.60	10.40
8.8	0.50	10.50	0.50	10.50
9.0	0.60	10.40	0.40	10.60
9.2	0.70	10.30	0.30	10.70
9.4	0.80	10.20	0.20	10.80
9.55	0.85	10.15	0.15	10.85
9.75	0.90	10.10	0.10	10.90

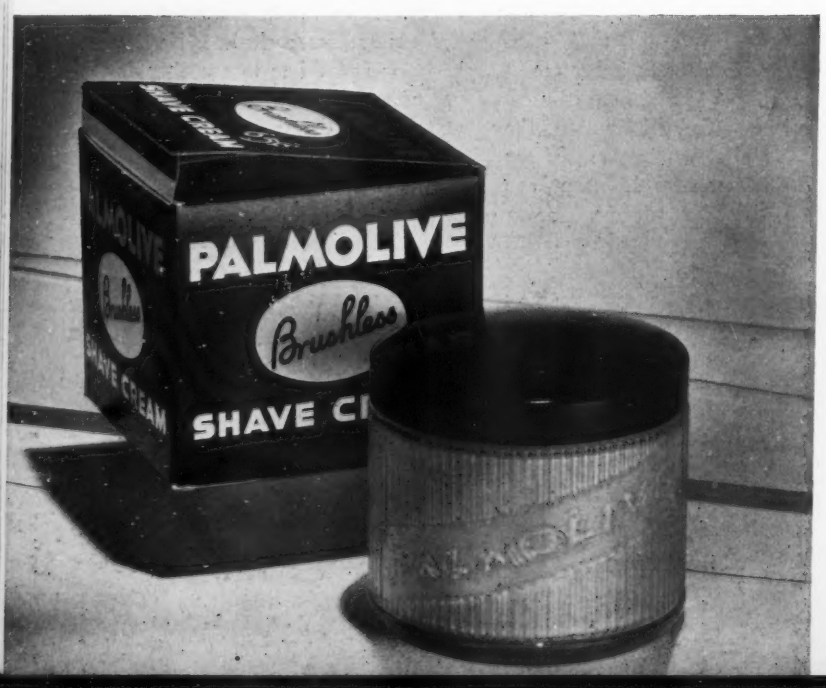
(*Turn to Page* 109)

New Products

Specially designed glass containers are used by United Drug Co., Boston, for its new "Silque" line of shampoo, hand lotion, and hair tonic. Closures are supplied by Armstrong Cork Products Co., of Lancaster, Pa.



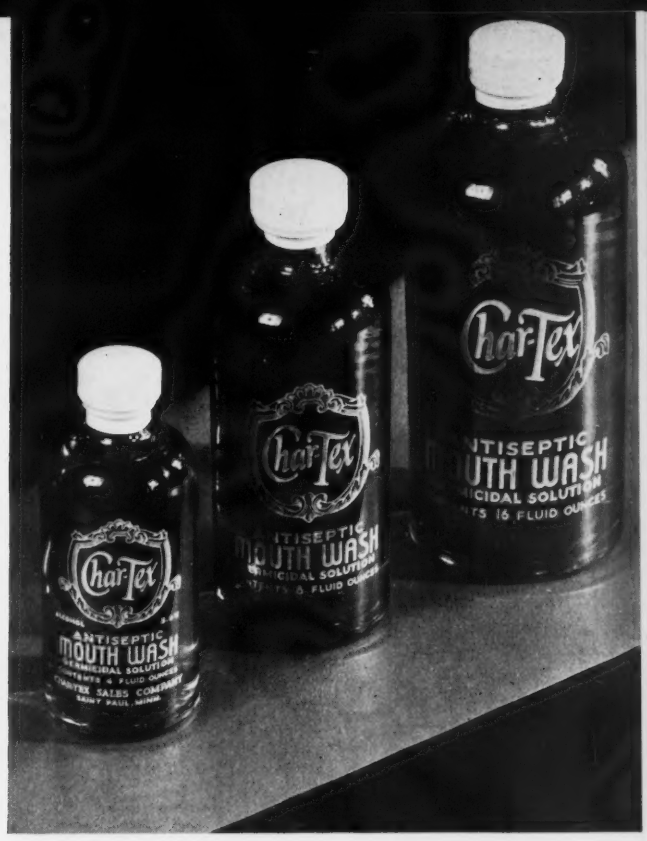
C-Z Chemical Co., Beloit, Wis., has adopted a striking and modern design for its new package for C-Z cleaner, while retaining the familiar yellow and black color combination of the old package.



Colgate-Palmolive-Peet Co. is now marketing "Palmolive" brushless shave cream in half pound jars as well as in tubes. Ribbed jar surface minimizes slipping.

and Packages

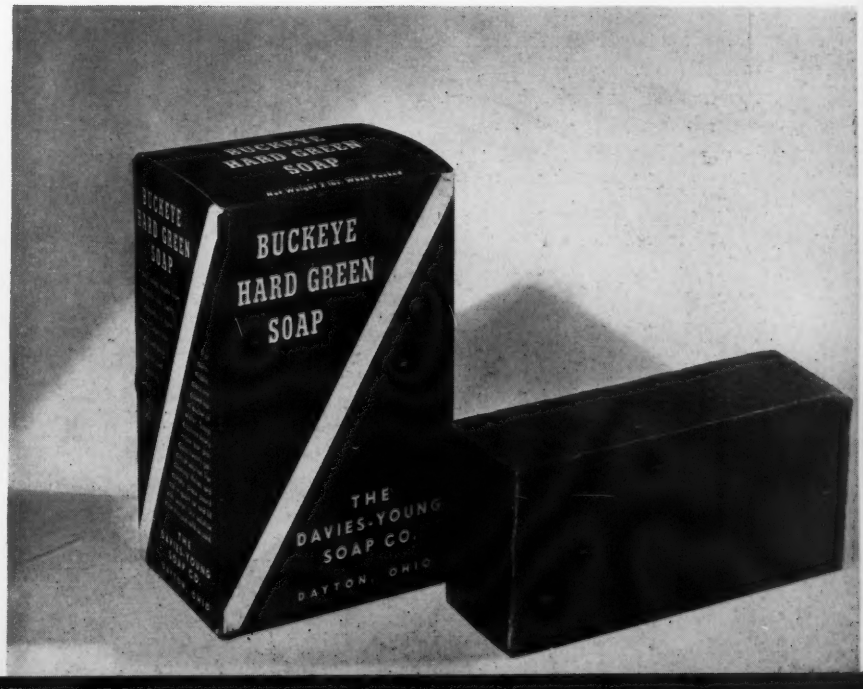
Cavalier Corp., Baltimore, uses an Armstrong molded cap for its "Cavalier Leather Renew." Cap equipped with a swab applicator.



Char-Tex Sales Co., St. Paul, packages its "Char-Tex" antiseptic mouth wash in a container which gives full display to the bright red color of the contents. Label copy is printed in white. Package topped by a white "Cel-O-Seal" band by Armstrong.

◆

Davies-Young Soap Co., Dayton, Ohio, has just repackaged its "Buckeye" hard green soap. Two one-pound bars are included in each carton. Packaged 25 cartons to the case.



News....

G-E Develops Cleaner

General Electric Co., Schenectady, N. Y., has developed a washing compound and water softener for distribution through its home laundry equipment dealers. It is sold at retail at 90 cents for a 37-ounce container. Each container contains 12 individual cartons sufficient, it is said for one ordinary wash, without the use of other soap.

Cleveland Cleaner 50th Year

Cleveland Cleaner & Paste Co., manufacturer of wall paper cleaners, Cleveland, is observing the 50th anniversary of its founding this year. Frank U. S. Gilbert is president. The concern recently completed construction of a two-story brick addition to its plant at 7275 Neville St. The development of a new product known as "Walvet," a non-crumbling wall paper cleaner, was also recently announced.

Carpenter Joins Shulton

Frank N. Carpenter has joined Shulton, Inc., New York, in an executive capacity and will assist William L. Schultz, president, with the sale and merchandising of the "Early American" line of toiletries.

Soap Committee Meets Nov. 1

The fall meeting of committee D-12 of the American Society for Testing Materials will be held Monday and Tuesday, Oct. 31 and Nov. 1, at the Hotel New Yorker, New York City. This committee is in charge of formulating specifications and standard testing methods for soaps, detergents, and allied materials. Members of the industry interested in attending the fall sessions may secure further particulars from H. P. Trevithick of the New York Produce Exchange, chairman of committee D-12, or from B. S. Van Zile, Colgate-Palmolive-Peet Co., secretary of the committee.

Cubans Form Soap Assn.

A National Association of Soap Manufacturers, including all but the two largest manufacturers, was recently organized in Cuba. The new association is reported to have opened offices in the Manzana de Gomez Building in Havana.

From Soap to Candy

Billy B. Van, for many years prominent comedian on the American stage, and later president of the Pine Tree Products Co., Newport, N. H., manufacturers of Billy B. Van's Pine Tree Soap, has recently formed a new company and entered the candy business under the name, Billy B. Van, The Candy Man. His headquarters are still located at Newport, N. H. The new company has taken over the line of an old New England candy manufacturer, formerly sold only in a few eastern states, and is repackaging it for national distribution. The original Billy B. Van's Pine Tree Soap ran into depression difficulties several years back, becoming involved with the bankers, ending in Billy Van severing his connection with the company.

New Scouring Agents

The General Dyestuff Corporation, New York City, has announced a number of new scouring agents for textiles. Among them are Igepal W for use in processing wool, and Igepal L, a similar product combined with a solvent, for processing all types of fabrics. Both compounds are resistant to hard water and to acids.

Franklin Leaves R. H. Macy

Edwin M. Franklin, who has been purchasing agent for the drug and cosmetic manufacturing division of R. H. Macy & Co., Long Island City, N. Y., has resigned. He has not announced his future plans as yet.

Lever Names Dr. Clarke

Dr. Charles Hugh Clarke has been named a member of the board of directors of Lever Brothers & Unilever, Ltd., London, England. Dr. Clarke is also a director of Bromborough Port Estate and Glycerine, a subsidiary company.

Laundry Institute to Meet

The American Institute of Laundering will hold its annual convention at St. Louis, Oct. 16-20. Technical discussions of new developments in laundry practice, as well as conferences on legislation, taxation, personnel and other problems of importance to the industry are slated for the four-day program.

Joseph Newman Better

Joseph Newman, president of Newman Tallow and Soap Machinery Co., Chicago, is recovering from an attack of pneumonia. Mr. Newman was able to leave Michael Reese Hospital the middle of last month, and is expected to be back at his office sometime during the middle of September.

C-P-P Acquires British Firm

Colgate - Palmolive - Peet Co., Jersey City, N. J., has purchased G. W. Goodwin and Sons, soap manufacturing concern at Salford, England. G. W. Goodwin and Sons was founded in 1875 and employs 200 workers. The Colgate company, it is announced, will expand the manufacturing plant of the new subsidiary.

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Cowles Names Wackman

Cowles Detergent Co., Cleveland, has named Wackman Chemical Co., St. Louis, as distributing agent for its products in the southern Illinois and Missouri territories.

Conduct Toilet Soap Survey

A survey covering family preferences for brands of toilet soaps was conducted recently in Menominee, Mich., by the *Herald-Leader*, the town's local newspaper, with the cooperation of the Parent-Teachers' Association and the parochial schools. The survey revealed that 99 per cent of the families use toilet soap and that the number of bars used a month by each family averages 5.9. "Lux" was shown to be preferred by 22 per cent of the families; 21 per cent preferred "Palmolive"; " Camay" was favored by 19 per cent; "Ivory" by 15 per cent; "Lifebuoy" by 10 per cent; and all other brands, 13 per cent.

Soap Employment Index

The index of employment in the soap industry for July, 1938, compiled by the U. S. Dept. of Labor registered 93.4 as compared with 91.7 in June, 106.2 in July, 1937, and 100 as the three-year average for the period 1923-25. The payroll index for July, 1938, was 109.0 as compared with 107.1 in June, and 116.0 in July, 1937.

Fats Price Index Declines

The Bureau of Raw Materials for American Vegetable Oils and Fats Industries has just published a price index by months for 23 fats and oils from Jan., 1938 through July, using the year 1926 as the base period. The weighted average for the entire group shows a decline from 70.7 in January, 1938, to 63.9 in July. Among the individual fats, grease registered a decline from 65.3 in January to 63.3 in July; coconut oil declined from 42.8 in January to 35.6 in July; olive oil, for the same period, declined from 92.1 to 75.9; olive oil foots declined from 107.8 to 92.6; palm oil, from 48.2 to 38.3; palm kernel oil, from 47.9 to 46.8; whale oil, from 91.3 to 81.3; tallow, from 69.0 to 62.1; and cottonseed oil, from 62.3 to 74.2.

Soap Production Up Over 1937

American soap production showed a gain of 18.1 per cent in tonnage and 10.8 per cent in sales value for the second quarter of 1938 as compared with the corresponding period in 1937, according to figures just released by the Association of American Soap & Glycerine Producers. While both tonnage and dollar sales were slightly below the previous three months, tonnage sales were 8.6 per cent and dollar sales 14.2 per cent above average quarterly sales since 1935. In terms of both pounds sold and dollar value, sales in the June quarter were the greatest for this period for the last four years during which the association has reported figures for the industry. Comparing the first half of 1938 with the corresponding half in 1937, tonnage sales were 1.8 per cent higher, while dollar value was .6 per cent higher. The total output for the first half of 1938 as reported by 79 manufacturers representing approximately 90 per cent of the industry was 1,331,289,622 pounds, with a gross value of $130,461,789.

Jergens Protests NLRB Order

Andrew Jergens Co., of California, located at Burbank, recently received an order from the National Labor Relations Board recommending that 35 employes who, according to company officials, had been laid off because of slack work at the soap plant, be rehired and given back pay. The Board declared that the employes had been discharged for union activities, and in its recommended order forbade the Jergens company to have anything to do with an independent organization of its employes, and to deal only with the American Federation of Labor Soap and Cosmetic Workers Union. Company representatives stated that they would protest the recommended order.

P&G Net Lower

Procter & Gamble Co., Cincinnati, reports a net profit of $17,439,000 for the year ended June 30. This compares with a net profit of $26,083,340 for the preceding year. Gross sales for the year totaled $221,143,925, as against $229,975,444 the previous year. The decline in prices of raw materials during the past year, reducing inventory values, was largely responsible for the lower profit, according to R. R. Deupree, president.

John Sunshine, head of John Sunshine Chemical Co., Chicago, who recently returned from a trip through the southwest territory, stops in one of the towns on his route long enough for a picture. His car seems to be fresh from the wash stand.

Protest State Trade Marks

A sharp protest against compulsory trade mark registration by states was filed by representatives of the soap industry at a hearing of the Committee on Trade Marks of the National Association of Secretaries of State held Aug. 10 at Albany, N. Y. A. E. Johnston of the Colgate-Palmolive-Peet Co. and A. P. Federline, assistant manager of the Association of American Soap and Glycerine Producers, filed objections against compulsory state registration by soap manufacturers. Mr. Johnston pointed out particularly the high cost involved in such numerous state requirements. The purpose of the meeting at Albany was to discuss uniformity in revision of state trade mark laws. Doris Byrne of the New York State division presided at the hearing.

Oil Trades Outing Sept. 20

The Oil Trades Association of New York, Inc., will hold an outing at the Pelham Country Club, Pelham, N. Y., Sept. 20. A full program of athletic events, consisting of golf, baseball, swimming and bowling has been scheduled. The Association also announces that plans are already being laid for the Grand Annual Banquet to be held at the Waldorf-Astoria Hotel, New York, on Nov. 1. Albert J. Squier is chairman of the entertainment committee. Further particulars concerning either of the events may be obtained from Mr. Squier at the association secretary's office, 15 Moore St., New York.

Colgate Earnings $1,646,421

Colgate - Palmolive - Peet Co., Jersey City, N. J., earned a net profit of $1,646,421 in the first six months of 1938, according to a recent report to stockholders by E. H. Little, president of the company. This represents earnings of 47 cents a share on the common stock outstanding and compares with a net profit of $1,715,697, or 50 cents a common share, for the same six months of last year. Mr. Little said that surplus had been increased $928,135 in the six months and that the end of the fiscal year on June 30 it had amounted to $7,922,100. The company's inventories, he also pointed out, were about $975,000 in excess of aggregate market values at the end of the fiscal year.

Leverhulme at Meeting Sept. 19

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Protest State Trade Marks

A sharp protest against compulsory trade mark registration by states was filed by representatives of the soap industry at a hearing of the Committee on Trade Marks of the National Association of Secretaries of State held Aug. 10 at Albany, N. Y. A. E. Johnston of the Colgate-Palmolive-Peet Co. and A. P. Federline, assistant manager of the Association of American Soap and Glycerine Producers, filed objections against compulsory state registration by soap manufacturers. Mr. Johnston pointed out particularly the high cost involved in such numerous state requirements. The purpose of the meeting at Albany was to discuss uniformity in revision of state trade mark laws. Doris Byrne of the New York State division presided at the hearing.

Oil Trades Outing Sept. 20

The Oil Trades Association of New York, Inc., will hold an outing at the Pelham Country Club, Pelham, N. Y., Sept. 20. A full program of athletic events, consisting of golf, baseball, swimming and bowling has been scheduled. The Association also announces that plans are already being laid for the Grand Annual Banquet to be held at the Waldorf-Astoria Hotel, New York, on Nov. 1. Albert J. Squier is chairman of the entertainment committee. Further particulars concerning either of the events may be obtained from Mr. Squier at the association secretary's office, 15 Moore St., New York.

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Max Factor Dies

Max Factor, 61, cosmetics manufacturer and Hollywood make-up expert, died at his home in Beverly Hills, Calif., on August 30. Mr. Factor, for 26 years was the trusted make-up adviser in Hollywood of many motion picture stars. In recent years, he became a manufacturer of a general line of cosmetics, employing 250 workers in his Hollywood plant. He was born in Lodz, Poland.

Soap Employment Index

The index of employment in the soap industry for June, 1938, compiled by the U. S. Dept. of Labor, registered 91.6, as compared with 91.7 in May, 102.5 in June, 1937, and 100 as the three year average for the period 1923-1925. The payroll index for June, 1938 was 106.9, as compared with 107.2 in May and 115.1 in June, 1937.

Laundryowners Hold Outing

The Laundryowners' Association of New York City, Inc., held its annual mid-summer outing at the Crescent Athletic Club, Huntington, Long Island, Aug. 19. Athletic events, including badminton, baseball, golf, horseshoes and swimming were held during the day, followed by a shore dinner and dancing in the evening.

Haas-Miller Appoints Dieck

Haas-Miller Corp., Philadelphia, manufacturers of industrial chemicals, oils and greases, announces the appointment of Fred W. Dieck as sales representative, servicing the rayon and silk throwsters industry. Mr. Dieck has for the past 25 years been with Susquehanna Silk Mills, Sunbury, Pa.

Drug Outing in October

The Drug Chemical & Allied Trades Section of the New York Board of Trade will hold its annual Fall outing and golf tournament at Skytop Lodge, Skytop, Pa., Oct. 21 and 22. The committee in charge of arrangements announces that a new feature this year will be a cocktail party on Thursday evening, Oct. 20, and a beefsteak roast on Saturday night, Oct. 22. Members of the committee are: R. E. Dorland, Dow Chemical Co., reception; Charles E. Kelly, Hagerty Bros., in charge of the golf tournament; R. B. Magnus, Magnus, Mabee & Reynard, Inc., transportation; T. F. Currens, Norwich Pharmacal Co., publicity; W. D. Barry, Mallinckrodt Chemical Co., general committee; and Hugh Craig, *Oil, Paint & Drug Reporter*, entertainment. Since accommodations at Skytop Lodge are limited to 300, reservations will be made in the order in which they are received at the office of the Section, 41 Park Row, New York, it was announced.

CSA Final Outing Sept. 13

The fourth in the series of golf tournaments sponsored by the Chemical Salesmen's Association, New York, will be held at Shackamaxon Country Club, Westfield, N. J., on Sept. 13. Immediately following the tournament, which is the final in the series, a special meeting of the membership will be held for the purpose of discussing a re-draft of the section in the new constitution relating to membership.

Develop New Vanillin

General Drug Co., New York, has recently introduced a new vegetable-source vanillin under the brand name of "Zimco Vanillin." The new vanillin, according to the manufacturers, is of particular interest since it is obtained from a source of raw materials practically unlimited, and is manufactured by a much simpler process than that hitherto employed. These factors, it is pointed out, tend toward a more stable price range. The new vanillin is made from lignin directly from the wood of newly cut coniferous trees.

A composition for cleaning and polishing consists of a mixture of an abrasive, aqueous ammonia, olein, alcohol and benzene. Tripoli may be used as the abrasive and amyl acetate may be added to improve the odor.

Names Agency for Dog Soap

Reade Mfg. Co., Jersey City, N. J., manufacturer of "Reade's Liquiform Dog Soap," has appointed H. W. Fairfax Advertising Agency, New York, to handle its advertising.

P&G Runs Oxydol Contest

Procter & Gamble Co., Cincinnati, is sponsoring a contest in connection with "Oxydol," which provides for ten first prizes of $100 and fifteen wrist watches. The contest began on Aug. 15 and will end Sept. 23. Newspapers, magazines, radio and point-of-sale displays are being used to promote interest in the contest.

Van Ameringen on Europe

Conditions in England, France and the Netherlands reflect a better sentiment among European business men, according to A. L. van Ameringen, president of van Amerigen-Haebler, Inc., New York, who returned recently from a six-weeks business trip abroad. He stated that there seems to be less unrest among the workers, employment is somewhat better than it was last year, and there are fewer fears of war among the people. Some business men do not view the financial situation in France with any great assurance, he said, but otherwise seem to feel better about the general outlook.

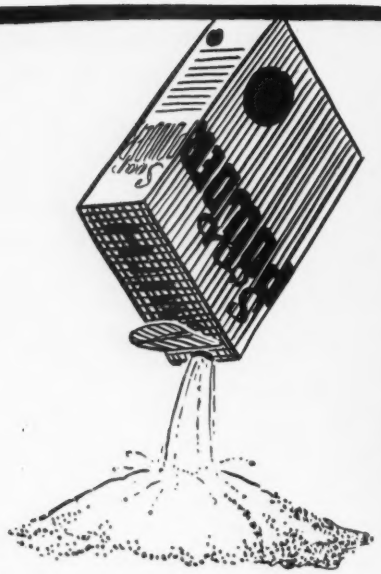
Ringel Back from Europe

George L. Ringel, vice-president of Fritzsche Brothers, Inc., New York, recently returned from a six-weeks' trip to Europe, during which he visited the Fritzsche extraction plant at Seillans, France. Mr. Ringel returned on the record-breaking trip made by the *Queen Mary*.

New German Soapless Agent

A concern in Germany has recently been granted a patent for a new soapless washing agent made from milk whey. The new product is said to possess cleansing properties greater than those of other available soapless agents, and to have wide commercial possibilities.

WANT TO IMPROVE YOUR SOAP POWDER?



IS YOUR soap powder just average? Give it new pep and sales appeal with P.Q. Silicate of Soda.

Your research will confirm that consumers of soap powders built with P.Q. Silicate get more and better cleaning. This is true because P.Q. Silicates have to greater degree, dirt-suspending powers so that in rinsing the soil is washed away and does not redeposit on the cleaned surface.

P.Q. Silicates are available for either dry mix or wet mix formulae. When you select P.Q., you profit from the years of research which make up P.Q. Silicate Service. Our Technical staff is ready to help you solve a problem. Write us at Philadelphia.

P.Q. Silicates are used in these products

Soap Powders
Dish Washing Compounds
Household Cleaners
Dairy Farm Cleaners
Garage & Service Station Cleaners

PHILADELPHIA QUARTZ COMPANY

EST. 1831

General Offices and Laboratory: 125 South 3rd Street, Philadelphia.
Chicago Sales Office: Engineering Building, 205 West Wacker Drive.

Works: Anderson, Ind., Baltimore, Md., Chester, Pa., Buffalo, N. Y., Kansas City, Kans., Rahway, N. J., St. Louis, Mo., Utica, Ill. Stocks in 60 cities.

PQ

Reg. U.S. Pat. Off

P. Q. SILICATES OF SODA

Soap Preferences in Indianapolis

THE Indianapolis *News* has recently published a survey showing consumer preferences for advertised trade-marked products, including laundry and toilet soaps, shaving creams, toothpastes, and mouth washes, in the city proper, and just outside the city, but within the Indianapolis trading area. Figures were compiled from questionnaires divided according to income areas, with each group proportioned according to the population in each area. Thus the proper relationship between higher and lower income brackets was maintained. In the tables, the first column represents the brand, the second column the percentage of Indianapolis families reporting a particular brand, and the third column the percentage of families outside of the city limits reporting a particular brand. After each tabulation is shown the percentage of families reporting using the particular type of product. For instance, 89.1 per cent of the families of Indianapolis reported the use of toilet soap.

Toilet Soap

	Per Cent	*Per Cent*
Lux	26.8	19.9
Camay	19.7	26.3
Palmolive	18.1	14.3
Lifebuoy	11.3	11.5
Woodbury	9.3	9.2
Ivory	5.8	8.9
Cashmere Bouquet	1.6	1.7
Kirk's Castile	1.5	2.0
Number Users—		
City		89.1
Outside		91.6

Soap for Bath

	Per Cent	*Per Cent*
Lifebuoy	33.8	30.6
Lux	13.8	11.2
Ivory	12.6	20.4
Palmolive	11.6	7.6
Camay	11.6	14.4
Woodbury's	3.3	3.7
Cashmere Bouquet	1.1	1.1
Number Users—		
City		94.3
Outside		96.9

Soap for Hands and Face

	Per Cent	*Per Cent*
Lux	23.0	18.2
Camay	19.9	25.7
Palmolive	17.8	13.7
Lifebuoy	12.9	10.3
Woodbury's	10.4	8.8
Ivory	7.8	14.1
Cashmere Bouquet	1.6	1.2
Number Users—		
City		92.8
Outside		96.6

Package Soap Flakes or Chips

	Per Cent	*Per Cent*
Chipso	31.5	27.3
Lux	13.0	11.6
Oxydol	11.3	18.5
Ivory	10.2	15.6
Rinso	6.9	6.3
Clean Quick	6.1	5.7
American Family	5.9	.8
Crystal White	2.6	.6
Fels Naptha	2.0	3.6
Number Users—		
City		77.6
Outside		71.8

Soaps for Silks and Woolens

	Per Cent	*Per Cent*
Lux Flakes	39.2	27.5
Dreft	26.5	25.7
Ivory	19.6	23.5
Rinso	2.3	1.6
Number Users—		
City		85.2
Outside		98.8

Shaving Cream

	Per Cent	*Per Cent*
Palmolive	21.6	17.1
Colgate	14.7	18.1
Williams	10.4	14.0
Mennen	9.1	6.8
Lifebuoy	7.7	5.6
Ingram	4.2	3.9
Listerine	2.9	5.2
Number Users—		
City		40.6
Outside		34.3

Brushless Shaving Cream

	Per Cent	*Per Cent*
Barbasol	37.2	37.1
Burma Shave	14.0	20.7
Molle	9.2	7.3
Palmolive	7.2	4.3
Mennen	5.4	5.6
Prep	4.4	3.4
Williams	3.8	6.0
Colgate	2.6	3.4
Koolox	1.9	3.4
Number Users—		
City		21.9
Outside		15.4

Announces New Mixer

Eclipse Air Brush Co., Newark, N. J., has developed an air-motor operated mixer called the "Pneumix Type B," to handle liquids up to 100 gallons. A feature of the new mixer is that it is spark-proof and will not become overheated, according to the manufacturer. Its speed ranges from 30 RPM to 6,000 RPM. The speed is controlled by the air intake on the motor, an important factor, it is pointed out, where there is a change of viscosity of the material during the mixing operation. Splash-proof performance has been provided by having the two propeller blades throw toward each other, it is said. The upper propeller is removable so that the unit can be used on smaller amounts of material. Over all size of the "Pneumix Type B" is 40 inches by 6 inches and it weighs 17 pounds.

New Soap Spreader

A new spreader for soap powders, detergents, scouring powders, and other powdered materials used in the maintenance of floors has been announced by the S. C. Lawlor Co., 124 North Aberdeen St., Chicago. The spreader which consists of a roller and handle, operates after the fashion of a lawn-mower and is designed to spread a soap powder or cleanser in small quantities over large floor areas in factories, institutions, office buildings, etc. preparatory to scrubbing.

Bims Golf Sept. 22

The final 1938 golf tournament of BIMS, the New York organization of sales executives in the cosmetic, soap, drug, and allied fields, will be held on September 22 at the Ridgewood Country Club, Ridgewood, N. J., according to an announcement from Martin F. Schulties, chairman of BIMS, and vice-president of the Hewitt Soap Co. The August golf tournament of BIMS was a great success and had the largest turn-out of the season. The No. 1 prize winner was A. C. Burgund of the Carr Lowrey Glass Co. At the next tournament, there will be a greater number of prizes (there were 15 at the August meeting) plus entertainment and a golf exhibition.

BENTONITE IN SOAP?

Are bentonite and other clays suitable for use in soaps,—or are they chiefly adulterants? What purpose do they serve, if any? These and other features of the use of clays in soap will be discussed in an early issue of SOAP by W. B. Hirschmann and Paul Bechtner.

THESE SELECTED OILS of *Lavender*

ASSURE 3-WAY ADVANTAGE TO YOUR BUSINESS . . . . .

OIL LAVENDER FLOWERS, Barreme, 50% Ester

OIL LAVENDER FLOWERS, Barreme, 38/42% Ester

OIL LAVENDER FLOWERS, Drome, 38/42% Ester

OIL LAVENDER FLOWERS, 35/38% Ester

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OIL LAVENDER FLOWERS, Terpeneless

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CONCRETE LAVENDER FLOWERS

CONCRETE LAVENDER FLOWERS, Colorless

Selected grades from $1.50 per pound up. Write us for full details.

HERE'S HOW: 1. By enabling your Purchasing Division to acquire the most suitable qualities and the best possible values without assuming the risks and responsibilities incidental to unreliable "bargain" purchases. 2. By helping your Production Division to meet schedules and maintain continuous, trouble-free production through their dependability and unvarying uniformity. 3. By simplifying the problems of your Sales Division and making their efforts more productive through improvement of product and appeal.

AND HERE'S WHY: For years we have been a leading supplier of lavender oils. Our extraction plant at Seillans, France, is in the center of the world's principal lavender producing region. Thus, through our own organization, we are able to produce these essences most economically or acquire choicest lots from reliable farmer-producers. By our direct purchases of raw materials, constant supervision of production, and long experience in catering to the soap manufacturer's requirements, we are able to guarantee the superiority of quality and value embodied in these selected lavenders. Truly, each is a made-to-order product for perfuming of soap.

You can confirm our claims by writing us for free testing samples and making comparisons. And remember, our services are available for **any** perfuming problem . . . Why not let us help you?

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BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

Cosmeticians Meet in Chicago

The American Cosmeticians National Association will meet for its annual convention and fall exposition at the Hotel Sherman, Chicago, Sept. 12-15. A program of guest speakers, including experts from Hollywood, who will demonstrate the latest methods in facial beautification and hair styling has been planned.

Foragers in New Home

Foragers of America, organization of sales representatives of soap and toilet goods firm, are now located in their new club headquarters at Midston House, 38th St. and Madison Ave., New York.

C-P-P Holds Grocers' Contest

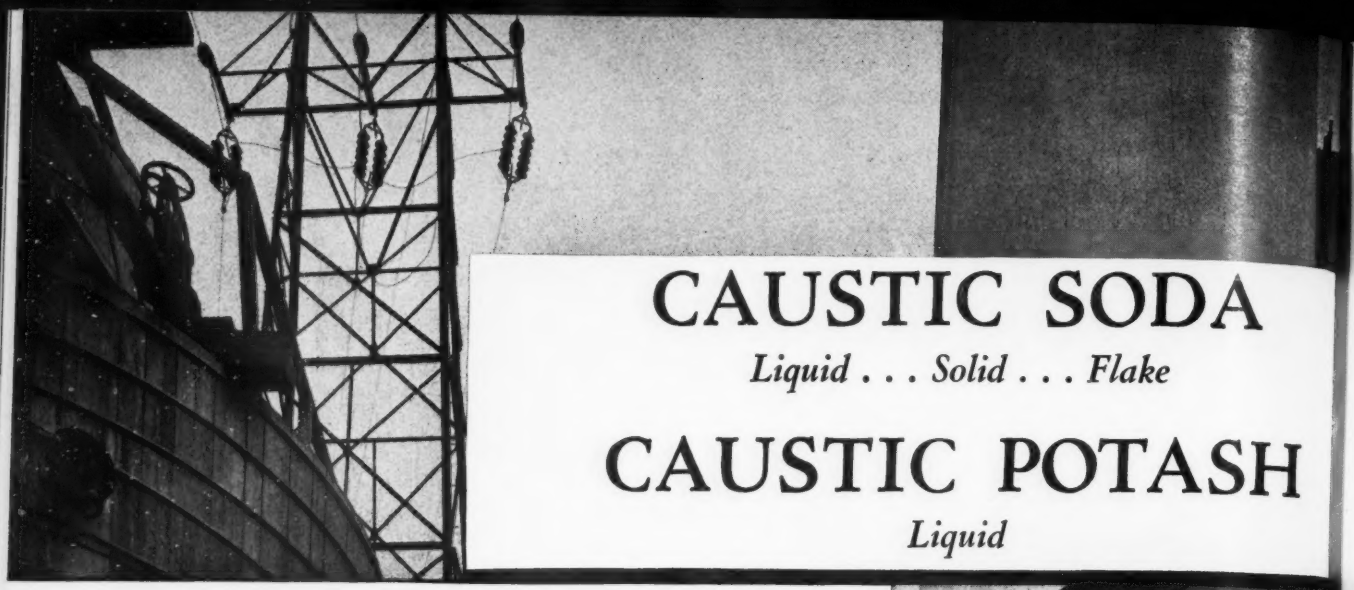
Colgate - Palmolive - Peet Co., Jersey City, N. J., recently sponsored a contest for owners, managers, and clerks of grocery stores in which prizes of $1,000 in cash were distributed for the best letters on "How I Increased My Sales of Concentrated Super Suds and Palmolive Soap." Fifty-five grocers participated in the awards. The Colgate company supplied the grocers with display material and newspaper mats for use in conjunction with the contest.

New "Camay" Contest

Procter & Gamble Co., Cincinnati, is offering prizes of $3,000 and 200 rugs in a contest which began recently to promote the sale of "Camay" soap. The prizes are being offered each week for a period of six weeks. Newspapers, magazines, radio and special display material are being used to advertise the contest.

Detergent Films

Washing compositions in film form are made from mixtures containing a sulfonated higher aliphatic alcohol or its salt, and a cellulose derivative which yields a colloidal solution in water, such as a cellulose alkyl ether. Johann Linhart. Austrian Patent No. 153,057.



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CAUSTIC POTASH

Liquid

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TRI-SODIUM PHOSPHATE
DI-SODIUM PHOSPHATE

ALSO MIXED DETERGENTS COMPOUNDED
TO MEET USERS' OWN SPECIFICATIONS

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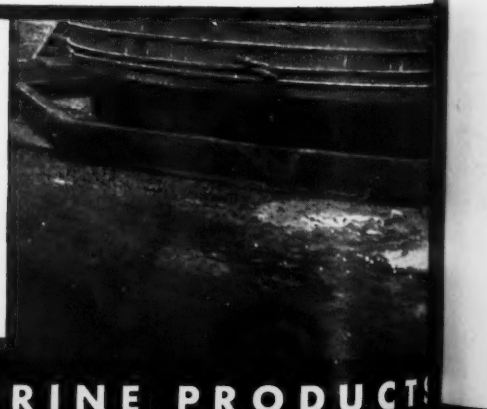

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DIVISION OF WESTVACO CHLORINE PRODUCTS

Contracts Awarded

Low Detergent Bidder

B. P. Ducas Co., Jersey City, N. J., was low bidder on three lots of dish washing compound detergent, 7,125 pounds, 4,875 pounds and 975 pounds, at prices of 3.57c, 3.79c and 4.43c respectively, in a recent opening by the U. S. Marine Corps, at Washington.

Low Shaving Soap Bidder

N. Brittingham & Son, Philadelphia, were low bidders on 400 pounds of shaving soap at 25c in a recent opening by the Bureau of Supply, U. S. Treasury Dept., at Washington. On 75,000 pounds of toilet soap, Procter & Gamble Distributing Co., Baltimore, and Kirkman & Sons, Brooklyn, were both low bidders at 6.01c. On 10,125 pounds of milled soap, Colgate-Palmolive-Peet Co., Jersey City, N. J., was low bidder at 8.83c.

Low Navy Dept. Bidder

J. A. Tumbler Laboratories, Baltimore, was low bidder on 15,000 pounds of cleaning compound at 5.8c in a recent opening by the Bureau of Supplies and Accounts, U. S. Navy Dept., at Washington.

Boston Insecticide Award

Gulf Oil Corp., Boston, was awarded the contract for 500 gallons of insecticides at 90c per gallon in a recent opening by the U. S. Army Quartermaster at Boston.

Fort Sam Houston Awards

Kirkman & Sons, Brooklyn, were awarded the contract for 257,640 pounds of laundry soap at 3.73c in a recent opening by the U. S. Army Quartermaster at Fort Sam Houston, Tex. On two lots of grit soap, 4,800 cakes each, Conray Products Co., New York was awarded the contract at prices of 3.49c and 3.1c.

Raritan Arsenal Award

E. F. Houghton & Co., Philadelphia, were awarded the contract for 4,200 pounds of metal cleaner at 3.75c in a recent opening by the U. S. Army Ordnance Division at Raritan Arsenal, N. J.

Chicago TSP Award

H. Kohnstramm & Co., Chicago, were awarded the contract for 26,000 pounds of trisodium phosphate at 2c in a recent opening by the U. S. Army Quartermaster at Chicago.

Wilmington Soap Awards

Iowa Soap Co., Burlington, Ia., was awarded the contract for 2,025 pounds of toilet soap at $192 in a recent opening by the U. S. Army Engineers Quartermaster at Wilmington, N. C. On 6,000 pounds of laundry soap, Armour & Co., Chicago, were awarded the contract at $206. On 1,406 pounds of grit soap, Swift & Co., Wilmington, N. C., were awarded the contract at $94.

St. Louis Soap Awards

Swift & Co., Chicago, were awarded the contract for 1,875 pounds of soap powder at 2.9c in a recent opening by the U. S. Army Engineers Quartermaster at St. Louis. On 18,000 pounds of laundry soap, Armour & Co., St. Louis, were awarded contract at 3.2c.

Fort Mason Soap Award

R. M. Hollingshead Corp., Camden, N. J., was awarded the contract for 6,000 pounds of saddle soap at 11.4c in a recent opening by the U. S. Army Quartermaster at Fort Mason, Calif.

Camp Beauregard Award

American Fluoride Corp., New York, was awarded the contract for 1,000 gallons of insecticide at 60c in a recent opening by the U. S. Army Quartermaster at Camp Beauregard, Alexandria, La.

Low Soap Bidders

Sterling Supply Corp., Philadelphia, was low bidder on 5,950 pounds of chip soap at 5.97c in a recent opening by the U. S. Marines Corps, at Washington. On 300 pounds of grit soap, Swift & Co., Chicago, were low bidders at 7c.

Low Treasury Dept. Bidders

Armour & Co., Chicago, were low bidders on 288 cans of scouring powder at 2.6c in a recent opening by the Bureau of Supply, U. S. Treasury Dept., at Washington. On 150 gallons of insecticide, Conray Products Co., New York, was low bidder at 69c. On 48,000 pounds of laundry soap, Kirkman & Sons, Brooklyn, were low bidders at 3.25c. On another lot of 24,000 pounds of scouring powder, Armour & Co. were again low bidders at 1.21c.

Low Chip Soap Bidder

Sterling Supply Corp., Philadelphia, was low bidder on 6,400 pounds of chip soap at 5.74c in a recent opening by the U. S. Post Office Dept. at Washington.

Naphthalene Flakes Award

James Good, Inc., Philadelphia, was awarded the contract on 25,000 pounds of naphthalene flakes at 5.465c in a recent opening by the U. S. Army Quartermaster at Philadelphia.

Soy Bean Oil Plant Sold

Shellbarger Grain Products Co., a soy bean oil manufacturing concern at Decatur, Ill., has been sold to Spencer, Kellog & Sons, Buffalo, N. Y.

Carbide & Carbon Book

Carbide and Carbon Chemicals Corp., New York, has just published a new edition of *Synthetic Organic Chemicals*, an 80-page book describing the specifications, properties and uses of its 105 organic chemical products. The properties of 29 new chemicals which have become commercially available since the last issue of the catalog are included, as well as a new section on "Tergitol" penetrants. The solubility table has been enlarged to include data on 71 solvents. Copies available on request.

New Trade Marks

The following trade-marks were published in the August issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

BUG-BOO—This in solid letters with drawing representing a number of insects being destroyed, describing solution for removing bugs from windshields of automobiles. Filed by Baum Products Co., Ashton, Idaho, May 6, 1938. Claims use since March 9, 1938.

EXTERMITAL — This in solid letters describing insecticides. Filed by Extermital Chemical Co., Dayton, O., May 16, 1938. Claims use since March, 1937.

COAST CHEMICAL COMPANY, INC.—This in solid letters with drawing of a globe representing the world describing preparation for the treatment of Athlete's Foot. Filed by Coast Chemical Co., Inc., Los Angeles, May 20, 1938. Claims use since March 18, 1938.

TOILEX—This in solid letters describing toilet bowl cleanser. Filed by Purex Corp., Ltd., South Gate, Calif., June 6, 1938. Claims use since May 17, 1938.

FERRET—This in solid letters with drawing of a ferret describing rat poison. Filed by Gas-Gun Mfg. Co., Kansas City, June 17, 1938. Claims use since March 3, 1937.

ROSE-X—This in solid letters with geometric design describing liquid waxing compounds. Filed by Roselux Chemical Co., New York, Dec. 28, 1937. Claims use since Dec. 15, 1936.

CHARM-WITE — This in semi-solid letters describing shoe cleaning fluid. Filed by William Wolf. Newark, N. J., Nov. 27, 1937. Claims use since April 12, 1937.

ADCO — This in solid letters describing detergents. Filed by American Disinfecting Co., Sedalia, Mo., Dec. 10, 1937. Claims use since 1925.

THING—This in solid letters describing soap. Filed by Frailey Products, Inc., Norwalk, Conn., Nov. 29, 1937. Claims use since July, 1927.

ROSE-X—This in solid letters describing cleaning compound. Filed by Roselux Chemical Co., New York, May 3, 1938. Claims use since Dec. 1, 1935.

SHEFFIELD — This in solid script describing tooth paste. Filed by Sheffield Co., New York, May 11, 1937. Claims use since 1850.

A drawing similar to a checkerboard in design describing tooth paste. Filed by Chex Laboratories Co., Des Moines, Ia., Feb. 5, 1938. Claims use since Dec. 15, 1937.

CHEX—This in semi-solid letters describing tooth powder. Filed by Chex Laboratories Co., Des Moines, Ia., Feb. 9, 1938. Claims use since Dec. 15, 1937.

ALEX HUDNUT AIDS TO BEAUTY —This in solid letters over insignia engraved with the letter "H," describing shampoo. Filed by Alex Hudnut Pharmacy of N. Y., Feb. 23, 1938. Claims use since Aug. 2, 1937.

SAPODERMA—This in solid letters describing shampoo. Filed by Elizabeth Gould, Brooklyn, April 20, 1938. Claims use since July 19, 1937.

Drawing representing a bed bug pierced by a shaft of lightning describing preparation for killing bed bugs. Filed by B. Heller & Co., Chicago, April 30, 1938. Claims use since April 14, 1938.

COPROTE—This in solid letters describing insecticides. Filed by General Chemical Co., New York, June 1, 1938. Claims use since May 11, 1938.

MING — This in solid letters similar in characteristics to Japanese letters describing automobile cleaner. Filed by Chester J. Stebenne, Denver, May 19, 1938. Claims use since April 25, 1938.

L&K—This in solid letters on reverse plate describing soap. Filed by Lanman & Kemp-Barclay & Co., New York, June 8, 1938. Claims use since June, 1923.

O.K.—This in solid script describing soap powder. Filed by Procter & Gamble Co., Cincinnati, June 10, 1938. Claims use since 1860.

BLENDSOL—This in solid letters describing dry cleaning compound. Filed by R. R. Street & Co., Chicago, June 11, 1938. Claims use since Feb. 27, 1936.

AK-RO-NO—This in solid letters with drawing of automobile on reverse plate describing preparation for cleaning rubber products. Filed by Ak-Ro-No Auto Products Co., Vandalia, Ill., June 13, 1938. Claims use since Feb. 1, 1937.

PE-TRE-NO-MINIT — This in solid letters describing general cleaner. Filed by Pete Biondo, St. Louis, March 30, 1938. Claims use since Jan. 1, 1938.

KOSMETEX—This in solid letters describing compound for removing cosmetics from fabrics. Filed by Patek & Co., San Francisco, May 31, 1938. Claims use since May 16, 1938.

HAIR KLEEN — This in semi-solid letters with geometric design showing the letters "UD" interlocked, describing shampoo. No claim is made to the words "Hair Kleen" apart from the mark. Filed by United Distributors, Inc., Louisville, Ky., April 15, 1938. Claims use since Feb. 10, 1938.

CANNIBAL EATS EVERYTHING IN THE PIPE — This in solid letters with drawing of a savage with spear and shield describing drain pipe cleaner. Filed by John Sunshine Chemical Co., Chicago, April 22, 1938. Claims use since April 22, 1938.

ARWELL MOTH MAGIC — This in solid letters, the first word in script, describing fumigating prepara-

tion. No claim is made to the word "Moth" apart from the mark. Filed by Arwell, Inc., Waukegan, Ill., April 23, 1938. Claims use since March 1, 1938.

PAR-OIL—This in solid letters describing shampoo. Filed by Paragon Distributing Corp., New York, May 7, 1938. The word "Oil" is disclaimed apart from the mark. Claims use since 1936.

ACTIFOAM—This in solid letters describing tooth paste. Filed by Lambert Pharmacal Co., Wilmington, Del., May 12, 1938. Claims use since April 26, 1938.

MICROBEX—This in solid letters describing germicide. Filed by Mathieson Alkali Works Inc., New York, May 24, 1938. Claims use since March 17, 1938.

SPEE-D-Z—This in solid letters with a drawing of an airplane in flight, describing dance floor wax. Filed by Madison & Son, Great Falls, Mont., June 6, 1938. Claims use since May 10, 1938.

SILMACOL—This in solid letters describing antiseptic preparation. Filed by Amfre Drug Co., New York, July 9, 1938. Claims use since June 9, 1938.

WEIL'S WORTH WHILE SALVE —This in outline letters on circular design describing preparation for the treatment of Athlete's Foot. No claim is made to the word "Salve." Filed by Miriam A. Weil, Savannah, Ga., July 15, 1938. Claims use since Sept. 10, 1935.

CAROL H. MERRITT — This in solid script beneath portrait of applicant. Filed by Carol H. Merritt & Co., Fayette, Miss., May 9, 1938. Claims use since Jan. 15, 1933.

HEAZE — This on diamond-shaped reverse plate describing preparation for the treatment of Athlete's Foot. Filed by R and H Medical Co., Plymouth, Ind., May 9, 1938.

LIQUALOR—This in solid letters describing preparation for Athlete's Foot. Filed by Castill Chemical Co., Baltimore, May 11, 1938. Claims use since Feb. 1, 1937.

Trade Marks Granted

358,049. Shampoos. Nassour Bros., Inc., Los Angeles. Filed July 10, 1937. Serial No. 395,076. Published Jan. 18, 1938. Class 6.

358,059. Cleaning Powder. D. Wroblewski & Co., Brooklyn. Filed Oct. 6, 1937. Serial No. 398,225. Published April 19, 1938. Class 4.

358,085. Industrial Cleaner. Zefer Mfg. Co., Denver. Filed Dec. 21, 1937. Serial No. 401,113. Published April 19, 1938. Class 4.

A LESSON IN SOAP . . .

Inadequate raw material supplies can hamstring any industry . . . read what plugging up the raw material channels of the Germany soap industry has done for the quality and quantity of German production . . . a first-hand analysis of the situation in an early issue of SOAP by Ralph F. Seckelson.

358,087. Floor Cleaner. Schalk Chemical Co., Los Angeles. Filed Dec. 27, 1937. Serial No. 401,277. Published April 19, 1938. Class 4.

358,117. Shampoo. Walter F. Koken, St. Louis, Mo. Filed Jan. 18, 1938. Serial No. 402,066. Published April 5, 1938. Class 6.

358,130. Preparation for Athlete's Foot. Hypotox Laboratories, College Hill, Cincinnati. Filed Jan. 24, 1938. Serial No. 402,260. Published April 12, 1938. Class 6.

358,141. Preparation for Athlete's Foot. Buck & Buck Co., Tulsa, Okla. Filed Jan. 28, 1938. Serial No. 402,411. Published April 5, 1938. Class 6.

358,145. Antiseptic. Secret Products Co., Los Angeles. Filed Jan. 29, 1938. Serial No. 402,481. Published April 12, 1938. Class 6.

358,148. Germicide. G. D. Searle & Co., Chicago. Filed Feb. 1, 1938. Serial No. 402,573. Published April 5, 1938. Class 6.

358,149. Lotion for Athlete Foot. Frederick A. Frazier, Berkeley, Calif. Filed Jan. 31, 1938. Serial No. 402,582. Published April 19, 1938. Class 6.

358,156. Cleaning Paste. Nellie-Lou Corp., Norwalk, Conn. Filed Feb. 9, 1938. Serial No. 402,865. Published April 19, 1938. Class 4.

358,166. Bath Salts. Phosphate Mining Co., New York. Filed Feb. 17, 1938. Serial No. 403,147. Published April 12, 1938. Class 6.

358,229. Compound for Cleaning Dental Plates. Morgan-Sabalol Products, Inc., New York. Filed March 12, 1937. Serial No. 389,998. Published April 26, 1938. Class 4.

358,293. Soap. Kleen-Et Products Co., Mansfield, O. Filed Feb. 14, 1938. Serial No. 403,023. Published April 26, 1938. Class 4.

358,395. Automobile Polish. Jackson Laboratories, Philadelphia. Filed Oct. 12, 1937. Serial No. 398,384. Published Nov. 30, 1937. Class 16.

358,432. Glass Polish. Wil-Meyer Co., New York. Filed Feb. 8, 1938. Serial No. 402,818. Published May 3, 1938. Class 4.

358,453. Preparations for Cleaning Artificial Dentures. I. Putnam, Inc., Elmira, N. Y. Filed March 4, 1938. Serial No. 403,707. Published May 3, 1938. Class 4.

358,523. Shampoo. Marathon Laboratories, Inc., Newark, N. J. Filed Aug. 30, 1937. Serial No. 396,925. Published May 3, 1938. Class 6.

358,532. Insecticides. Coastal Chemical Co., Harlingen, Tex. Filed Oct. 21, 1937. Serial No. 398,756. Published April 19, 1938. Class 6.

358,582. Herbicides. California Spray-Chemical Corp., Wilmington. Filed Feb. 5, 1938. Serial No. 402,713. Published April 26, 1938. Class 6.

358,607. Glass Cleaner. C-Lite Products, Goshen, Ind. Filed Feb. 18, 1938. Serial No. 403,178. Published May 10, 1938. Class 4.

358,613. Insecticides. Monsanto Chemical Co., St. Louis. Filed Feb. 21, 1938. Serial No. 403,274. Published May 3, 1938. Class 6.

358,628. Solvent for Washing Painted Surfaces. Basol Laboratories,

(*Turn to Page* 117)

Photo
Bob Leavitt

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ISCO LIQUID Caustic Potash
is a contribution to the field of better chemicals • Sparkling water white solution • Quality and uniformity rigidly controlled • You'll *like* it.

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(A new type of old fashioned herbal odor)

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(A modern version of this best seller)

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CHICAGO LOS ANGELES TORONTO

Raw Material Markets

(As of August 29, 1938)

NEW YORK—The trend of the market for soap and sanitary chemicals raw materials was downward in the period just ended, although there were fewer reductions in prices of the various commodities. Business continued along narrow lines, and purchases were generally limited to meet the immediate needs of consumers. In the list of oils and fats, crude coconut oil was reduced 1/8c per pound, cottonseed oil declined 1/2c per pound, tallow and grease quotations were each down 1/8c per pound, palm kernel moved 1/2c per pound lower, and olive oil foots, registering the widest fluctuation in the group, declined 5/8c per pound. There were more changes in the prices for perfuming materials in view of the dull trading, which created keener competition among sellers. The most important changes were the reduction in price of anise oil to a basis of 78c to 80c per pound; the reduction of 5c per pound in the price for cassia oil; further reduction in cedarleaf oil to 63c to 68c per pound; and the increase of 15c per pound on peppermint oil.

OILS AND FATS

Coconut Oil

Quotations on crude coconut oil were reduced 1/8c per pound in the period just closed. Trading in this commodity was fairly quiet. There were occasional inquiries, but activity was reported to be confined mainly to supplies on unfilled contracts with very little new business. The domestic consumption of crude coconut oil during the quarter ending June 30 was reported to be 150,793,411 pounds, while production for the same period was 70,477,228 pounds. Stocks on hand at the close of the quarter were given at 194,144,730 pounds.

Cottonseed Oil

The trend of prices for crude cottonseed oil was downward during the period, quotations declining 1/2c per pound. Publication of the government crop report during this period indicated that the yield of the present cotton crop would be greater than was anticipated, and this, together with the fact that there is a large carryover from the season recently closed, tended to reduce prices. It was felt that supplies of crude cottonseed oil for the current year would be more than ample for the requirements of consumers.

Olive Oil

There was no change in the price of denatured olive oil during the period. The market retained a firm tone and quotations were held at the previous level, although inquiries were reported as only fair and for unimportant quantities. Quotations on olive oil foots were reduced 5/8c per pound.

Palm Oil

Quotations on palm oil were unchanged during the period. There was very little demand, the downward trend of other commodities causing consumers to hold off on purchasing. Offerings were said to be light and the market held a steady tone. Palm kernel oil declined 1/2c per pound.

Tallow

Sales of tallow were reported at 5 1/4c per pound for extra, during the period, showing a decline of 1/8c from last month's quotation. The tone of the market appeared to be steady at the reduced level, offerings being lighter. Domestic consumption of inedible tallow during the quarter ending June 30 was 182,198,010 pounds. Production for the same period was 130-700,728 pounds, while stocks on hand at the close of the quarter were 237,004,389 pounds. Quotations on grease shaded 1/8c per pound, in company with tallow.

PERFUMING MATERIALS

Anise Oil

Lack of sustained demand for anise oil served to create competition among sellers during this period, and prices had a downward trend in spite of the reported lack of offerings from the source. Quotations were reduced to 78c to 80c per pound. The market appeared steady at those levels. Prices on cassia oil were lower to a basis of 95c to $1 per pound, and it was believed that orders might be placed at further concessions because of the growth of competition.

Peppermint Oil

Prices on natural peppermint oil advanced to $2.30 to $2.55 per pound. The higher prices were said to have been established by midwestern dealers in order to adjust prices payable to farmers for the new crop oil. Crop prospects are reported none too encouraging. Cedarleaf oil prices were again lowered, to a basis of 63c to 68c per pound.

Argentine Soap Imports Up

Imports of soaps into Argentina increased over 40 per cent in 1937, as compared with 1936. In 1937 imports of soaps of all kinds aggregated 385 metric tons, against 271 metric tons the preceding year. According to a recent industrial census, the Argentine has 233 soap plants with aggregate capital investments of over 15,000,000 pesos. Several internationally known soap companies have plants in the Argentine. The domestic industry is favored with certain packing house by-products, but the United States is an important supplier of rosins and alkalies.

Raw Material Prices

(As of August 29, 1938)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	$ .05¾	$ .06¼
Acid, Boric, bbls., 99½%	ton	106.00	138.00
Cresylic, drums	gal.	.73	.74
Low boiling grade	gal.	.78	.80
Oxalic, bbls.	lb.	.10¾	.12
Adeps Lanae, hydrous, bbls.	lb.	.16	.18
Anhydrous, bbls.	lb.	.17½	.19
Alcohol, Ethyl, U.S.P., bbls.	gal.	4.56½	4.61½
Complete Denat., SD 1, drums, ex.	gal.	.31	.33
Alum. Potash lump	lb.	.036	.039
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., bbls.	lb.	.08	.12½
Bentonite 1, works	ton	—	16.00
Bentonite 2, works	ton	—	11.00
Bleaching Powder, drums	100 lb.	2.25	3.35
Borax, pd., cryst., bbls., kegs	ton	58.00	74.00
Carbon Tetrachloride, car lots	lb.	—	.05¼
L. C. L.	lb.	.05¾	.08½
Caustic, see Soda Caustic. Potash Caustic			
China Clay, filler	ton	10.00	25.00
Cresol, U.S.P., drums	lb.	.10½	.11
Creosote Oil	gal.	.13½	.14½
Feldspar (200 to 325 mesh)	ton	14.00	15.00
Formaldehyde, bbls.	lb.	.05¾	.06¼
Fullers Earth	ton	10.00	30.00
Glycerine, C. P., drums	lb.	.14¼	.14¾
Dynamite, drums	lb.	.12¾	.13¼
Saponification, drums	lb.	.09½	.09¾
Soap, lye, drums	lb.	.08½	.08¾
Hexalin, drums	lb.	—	.30
Kieselguhr, bags	ton	—	35.00
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	per bbl.	—	2.45
Mercury Bichloride, kegs.	lb.	.99	1.13
Naphthalene, ref. flakes, bbls.	lb.	.06¾	.07
Nitrobenzene (Wyrhane) drums	lb.	.07¼	.09
Paradichlorbenzene, bbls., kegs	lb.	.12½	.15½
Petrolatum, bbls. (as to color)	lb.	.02¾	.08⅛
Phenol (Carbolic Acid), drums	lb.	.14½	.15½
Pine Oil, bbls.	gal.	.52	.59
Potash, Caustic, drums	lb.	.07	—
Flake	lb.	.07¼	.07½
Potassium Carbonate, solid	lb.	.06½	.06¾
Liquid	lb.	.03	.03½
Pumice Stone, powder	100 lb.	3.00	4.00
Rosins (600 lb. bbls. gross for net)—			
Grade B to H, basis 280 lbs.	bbl.	4.75	5.72
Grade K to N	bbl.	5.72	6.60
Grade WG and X	bbl.	6.75	7.60
Wood FF Spot	bbl.	5.65	6.10
Rotten Stone, pwd. bbls.	lb.	.02½	.04½
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04⅛	.04½
Olive Castile, bars	lb.	.22	.26
Olive Castile, powder	lb.	.28	.33
Powdered White, Neutral	lb.	.20	.22
Olive Oil Foot, bars, 68-70%	lb.	.09	.09½
Green, U.S.P.	lb.	.11	.13½
Tallow Chips, 88%	lb.	.07½	.08½
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.08	1.35
Car lots, in bulk	100 lb.	—	.90
Soda Caustic, cont., wks., solid	100 lb.	—	2.30
Flake	100 lb.	—	2.70
Liquid, tanks	100 lb.	—	1.95
Soda Sal., bbls.	100 lb.	$1.10	$1.30
Sodium Chloride (Salt)	ton	15.00	15.60
Sodium Fluoride, bbls.	lb.	.08	.08¾
Sodium Hydrosulphite, bbls.	lb.	.16	.17
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.22	.28½
Triethanolamine	lb.	.20	.22
Trisodium Phosphate, bags, bbls.	lb.	.02	.03
Zinc Oxide, lead free	lb.	.06½	.07¾
Zinc Stearate, bbls.	lb.	.21	.23

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.06⅜	Nom.
Castor, No. 1, bbls.	lb.	.09¾	.10½
No. 3, bbls.	lb.	.09¼	.10
Coconut (without excise tax)			
Manila, Tanks, N. Y.	lb.	.03¼	—
Tanks, Pacific Coast, futures	lb.	.03	—
Fatty Acids	lb.	.09	.09½
Copra, bulk, coast	lb.	.0185	Nom.
Corn, tanks, mills	lb.	.08¼	.08⅜
Fatty Acids	lb.	.06¾	.07
Cottonseed, crue, tanks, mill	lb.	.0675	.0700
PSY, futures	lb.	.080	.082
Fatty Acids	lb.	.06¼	.06¾
Soap stock 60-62%	lb.	.02⅝	.02⅞
Soap stock 65%	lb.	.03⅝	.03⅞
Foots (50% basis)	lb.	.01⅜	.01½
Greases, choice white bbls., f.o.b.			
Chicago	lb.	.05⅝	.06
Yellow	lb.	.04¾	.05
House	lb.	.04¾	.05
Lard Oil.			
Extra, bbls.	lb.	—	.09¼
Extra, No. 1, bbls.	lb.	—	.09
No. 2, bbls.	lb.	—	.08½
Linseed, raw, bbls.	lb.	.0840	—
Tanks, raw	lb.	.0780	—
Boiled, 5 bbl. lots	lb.	.0920	—
Oleo Oil, No. 1, bbls., N. Y.	lb.	.09¾	—
No. 2, bbls., N. Y.	lb.	.09¼	—
Olive, denatured, bbls., N. Y.	gal.	.94	.98
Foots, bbls., N. Y.	lb.	.07⅜	.07¾
Palm, shipment	lb.	.0290	—
Palm Kernel, shipment	lb.	.0365	Nom.
Red Oil, distilled, bbls.	lb.	.08⅜	Nom.
Saponified, bbls.	lb.	.08⅜	Nom.
Tanks	lb.	.07½	Nom.
Sesame Oil, dms.	lb.	.10½	Nom.
Soya Bean, domestic tanks, crude	lb.	.0670	—
Stearic Acid,			
Double pressed	lb.	.10½	.11½
Triple pressed, bgs.	lb.	.13¼	.14¼
Sterine, oleo, bbls.	lb.	.07¾	.08
Tallow, special, f.o.b. plant	lb.	.05⅛	—
City, ex. loose, f.o.b. plant	lb.	.05¼	—
Tallow oils, acidless, tanks, N. Y.	lb.	.08	—
Bbls, c/1 N. Y.	lb.	.08½	—
Teaseed Oil, crude	lb.	.08	.08⅛
Whale, refined	lb.	.0830	.0850

(As of August 29, 1938)

Essential Oils

Almond, Bitter, U.S.P.	lb.	$2.05	$2.75
Bitter, F. F. P. A.	lb.	2.00	2.50
Sweet, cans	lb.	.65	.68
Anise, cans, U.S.P.	lb.	.78	.80
Bay tins		1.35	1.50
Bergamot, coppers	lb.	3.90	4.00
Artificial	lb.	1.25	1.30
Birch Tar, rect. tins	lb.	.65	.70
Crude, tins	lb.	.16	.17
Bois de Rose, Brazilian	lb.	1.55	1.60
Cayenne	lb.	1.50	1.75
Cade, cans	lb.	.44	.45
Cajeput, native, tins	lb.	.48	.50
Calamus, tins	lb.	3.60	4.25
Camphor, Sassy, drums	lb.	.19	.20
White, drums	lb.	.17	.18
Cananga, native, tins	lb.	1.25	1.30
Rectified, tins	lb.	1.80	1.85
Caraway Seed	lb.	1.90	2.00
Cassia, Redistilled, U.S.P.	lb.	.95	1.00
Cedar Leaf, tins	lb.	.63	.68
Cedar Wood, light, drums	lb.	.28	.30
Citronella, Java, drums	lb.	.38	.40
Citronella, Ceylon, drums	lb.	.35	.35½
Clove, U.S.P., tins	lb.	.98	—
Eucalyptus, Austl., U.S.P., cans	lb.	.35	.37
Fennel, U.S.P., tins	lb.	1.10	1.15
Geranium, African, cans	lb.	3.25	4.50
Bourbon, tins	lb.	2.65	3.00
Turkish	lb.	2.00	2.25
Hemlock, tins	lb.	.75	1.00
Lavender, U.S.P., tons	lb.	2.00	5.00
Spike, Spanish, cans	lb.	1.05	1.10
Lemon, Ital., U.S.P.	lb.	3.15	4.00
Cal.	lb.	2.50	—
Lemongrass, native, cans	lb.	.38	.40
Linaloe, Mex., cases	lb.	1.25	1.30
Nutmeg, U.S.P., tins	lb.	1.20	1.25
Orange, Sweet, W. Ind., tins	lb.	1.90	2.00
Italian cop	lb.	2.25	3.25
Distilled	lb.	—	.50
Cal.	lb.	.75	—
Origanum, cans, tech	lb.	.90	1.60
Palmarosa	lb.	2.05	2.75
Patchouli	lb.	3.75	8.00
Pennyroyal, dom.	lb.	1.40	1.45
Imported	lb.	1.35	1.40
Peppermint, nat., cans	lb.	2.30	2.55
Redis., U.S.P., cans	lb.	2.55	2.80
Petitgrain, S. A., tins	lb.	.90	1.00
Pine Needle, Siberian	lb.	.95	1.00
Rose, Natural	oz.	5.25	22.50
Artificial	oz.	2.00	8.00
Rosemary, Spanish, tins	lb.	.56	.75
drums	lb.	.51	.70
Sandalwood, E. Ind., U.S.P.	lb.	4.75	4.80
Sassafras, U.S.P.	lb.	1.00	1.05
Artificial, drums	lb.	.36	.37
Spearmint, U.S.P.	lb.	1.70	1.75
Thyme, red, U.S.P.	lb.	.85	1.25
White, U.S.P.	lb.	.85	1.45
Vetivert, Bourbon	lb.	4.35	16.50
Ylang Ylang, Bourbon	lb.	3.50	6.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.05	$1.45
Amyl Cinnamic Aldehyde	lb.	2.00	2.25
Anethol	lb.	1.00	1.05
Benzaldehyde, tech.	lb.	.60	.70
U. S. P.	lb.	.85	.95
Benzyl, Acetate	lb.	.44	.49
Alcohol	lb.	.63	.68
Citral	lb.	1.40	3.10
Citronellal	lb.	.75	.80
Citronellol	lb.	1.75	1.80
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	2.75	4.65
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.50	.55
Eucalyptol, U.S.P.	lb.	.55	.57
Eugenol, U.S.P.	lb.	1.90	2.15
Geraniol, Domestic	lb.	.67	3.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	1.20	2.50
Heliotropin	lb.	1.80	2.20
Hydroxycitronellal	lb.	2.00	2.50
Indol, C. P.	oz.	2.00	2.13
Ionone	lb.	1.30	4.05
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	2.10	6.30
Linalyl Acetate	lb.	1.35	2.25
Menthol	lb.	3.00	3.35
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.30
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.40	.45
Musk Ambrette	lb.	3.25	3.65
Ketone	lb.	3.40	3.80
Xylene	lb.	1.00	1.25
Phenylactaldehyde	lb.	2.25	3.50
Penylacetic Acid, 1 lb. bot.	lb.	1.75	3.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	2.70	4.25
Rhodinol	lb.	6.65	13.00
Safrol	lb.	.50	.53
Terpineol, C. P., 1000 lb. drs.	lb.	.23	—
Cans	lb.	.25	—
Terpinyl Acetate, 25 lb. cans	lb.	.77	1.00
Thymol, U.S.P.	lb.	1.40	1.45
Vanillin, U.S.P.	lb.	2.25	2.35
Yara Yara	lb.	1.25	1.50

Insecticide Materials

Insect Powder, bbls.	lb.	.27	.28
Concentrated Extract			
5 to 1	gal.	1.80	1.90
20 to 1	gal.	6.70	6.80
30 to 1	gal.	9.85	10.00
Derris, powder—4%	lb.	.28	.36
Derris, powder—5%	lb.	.34	.42
Cube, powder—4%	lb.	.21	.26
Cube, powder—5%	lb.	.25	.30

Gums

Arabic, Amb. Sts.	lb.	.09¼	.09½
White, powdered	lb.	.12	.12½
Karaya, powdered No. 1	lb.	.14½	.23
Tragacanth, Aleppo, No. 1	lb.	2.65	2.70
Flake	lb.	.50	1.00

Waxes

Bees, white	lb.	.37	.39
African, bgs.	lb.	.21	.22½
Refined, yel.	lb.	.32½	.33
Candelilla, bgs.	lb.	.15	.15½
Carnauba, No. 1	lb.	.42½	.44
No. 2, N. C.	lb.	.41½	.42
No. 3, chalky	lb.	.33½	.34½
Ceresin, yellow	lb.	.08½	.11½
Paraffin ref. 125-130	lb.	.039	.040

Production Section

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries.*

Twitchell Glycerine

SOME notes have been set down covering practical experiences in fat splitting, and particularly the handling of glycerine obtained by the Twitchell Process. Twitchell glycerine lyes and fatty acids are inferior to the autoclaved products in respect to color and purity. Owing to the action of sulfuric acid and oxygen, as well as of dissolved sulfonic acids and resins, they are invariably dark in color. Acid glycerine lyes averaging 5°Be. are neutralized with lime or barium or rendered weakly basic and exactly neutralized with oxalic acid, when the greater part of the organic matter is carried down with the precipitate. In this manner, it is possible to reduce the ash content of the crude glycerine concentrated to 28°Be., to 0.5 per cent, and the organic impurities to 1 per cent. Organic matter can often be brought down with aluminum or iron, which is added either before neutralization or to the glycerine water after this has been made slightly basic to litmus by means of lime.

Subsequently it is again made slightly basic to litmus with more lime. In cases where only lime is available and where the use of a coagulant is not desired, the following method may be used, which has been found to give consistently good results: The glycerine water, made alkaline by continuous stirring with lime, is rendered neutral to phenolphthalein with acid glycerine water. The glycerine is filtered immediately after neutralization and immediately before and after concentration. This method kept the ash and organic matter within permissible limits.

The great influence of careful neutralization on the ash content is demonstrated by the experiments of I. Petraev, in which the same sample of glycerine gave ash contents of 0.8 and 1.3 per cent, according to the degree to which it was rendered alkaline. Since the content of other salts in the ash remained constant, the higher figure can only be ascribed to the lime. It is therefore suggested that the neutralization with milk of lime be pushed only to the faint color of the indicator, or that the foregoing method be applied.

Complete precipitation of the lime salts is to be recommended on other grounds. In the course of evaporation of the liquors, the functioning of the vacuum plant is disturbed by a variety of lime salts such as sulfates, carbonates and petroleum sulfonates, which cause boiler scale formation. This either leads to increased steam consumption or to breakdown. This trouble can be avoided by certain methods such as the use of small quantity of graphite. But since this means interrupting evaporation, owing to the necessity for filtering the precipitate before final concentration, and since the corrosive effect of graphite on the plant in this system has not been satisfactorily explained, it is impossible to recommend the process as yet for general adoption.

The crude glycerine is purified by distillation. Refining is readily effected with bone charcoal, activated carbon, or the black waste products from the manufacture of yellow prussiate of potash. The amount used depends on the activity of the adsorbent, but about 2 per cent generally suffices for treatment.

Many attempts have been made to combine the bleaching process with Twitchell splitting. This gives paler fatty acids and glycerine liquors even during the splitting operation.

In general a splitting yield of 90-92 per cent is easily reached, and one of 95 per cent when highly refined fats are used. With a yield above 95 per cent, the extra cost is entirely out of proportion to the additional yield. Although there is no technical objection to the use of fatty acids still containing neutral fat by the soap industry, a higher splitting yield would be welcome on economic grounds because the saponification process would be carried out more cheaply owing to the low initial cost of calcined soda. R. Heublum. *Manufacturing Perfumer* **3**, 214-7 (1938).

Shaving Creams

Shaving creams giving a good lather may be made from the following formulas:

	Parts
1. Coconut oil	30
Peanut or olive oil	5
Tallow	15
Stearin	53
Glycerine	15
Caustic potash, 38°Be.	48
Caustic soda, 38°Be.	9.5
Water	85

	Parts
2. Coconut oil	18
Peanut or olive oil	13
Castor oil	5
Stearin	45
Caustic Potash, 38°Be.	45
Glycerine	6
Water	45

In making up the first formula, the fats, with the exception of the stearin, are cold-saponified with about 2/3 of the caustic potash. The balance of the caustic potash and the caustic soda are carefully added, when warm, to the still warm, completely saponified soap. The stearin, warmed to 100°C., is then carefully stirred into the soap solution free from lumps. If the soap mass becomes too thick, it is allowed to stand for a long time with occasional stirring. After about 24 hours the mass will have become soft. Kneading the mass by machine is advantageous.

A similar procedure is followed with the second formula, but only caustic potash is used here, and only ½ is used for the saponification of the fats without the stearin. Both creams can also be prepared by saponifying the fats, except the stearin, by the boiling or semi-boiling process, then adding the remainder of the alkali to saponify the stearin, and finally saponifying the stearin. In this case, a part or all of the water must be worked in with the fats.

When using fatty acids in place of the fats and oils in the formulas, the procedure is to melt the entire batch of fatty acids and heat about 15°C. above the melting point of the fatty acid mixture. This melt is then slowly introduced into the mixture of water, lye and glycerine, which is preheated to about 75-80°C. The reaction proceeds with the development of heat and a rising of the kettle contents. Boiling is at first conducted with an excess of alkali, which is destroyed by an excess of stearic acid. Excess stearic acid is the best superfatting agent for shaving creams.

Shaving creams are perfumed with 0.5-2 per cent of perfume, which is mixed in cold. About 0.05 per cent of borax may be added, and 0.3-0.5 per cent of Calgon. From 0.5-1 per cent of boric acid is sometimes used. Many other additions such as small amounts of wetting agents, are possible. J. Davidsohn. *Manufacturing Perfumer* **3,** 209-11 (1938).

Comparative Wetting Power

The efficiency of wetting agents is conveniently expressed numerically in terms of wetting number. This is determined experimentally and is the time in seconds it takes for a circular disc of cotton cloth 2 cm. in diameter, to become completely wetted when gently laid on the surface of a 0.2 per cent solution of the agent in distilled water. A comparison of values of a number of products with that of plain water, and of soap in the form of sodium stearate, follows:

Substance	*Wetting No. in Seconds*
Plain water	(About 1 day)
Water-soluble petroleum sodium sulfonates	700
Stearyl sodium sulfate	175
Turkey red oil	140
Isopropyl naphthalene sodium sulfonate	115
Oleyl ethyl amide sodium sulfonate	95
Oil-soluble petroleum sodium sulfonates	90
Lauryl sodium sulfate	45
Sodium salt of alkylated aryl compounds (3 compounds)	7-25-40
Lauryl sodium sulfate containing 20% of salt	25
Lauryl sodium sulfate, salt-free	19
Sodium stearate	300

Perfumery & Essential Oil Record **29,** 241 (1938).

Fat Spoilage Tests

Chemical tests for fat spoilage should not be used as mere objective checks on organoleptic observations. Rather they should be a means for detecting impending spoilage, — for determining the type of spoilage once it has developed,—and for aiding in devising suitable measures for preventing spoiling. K. Taufel. *Fette und Seifen* **45,** 179-83 (1938)

Storage of Fatty Acids

Fatty acids may be stored in wooden kegs without darkening, but leakage sometimes occurs during the warm months of the year. Iron drums have been used, but these may cause discoloration. Iron drums are improved in this respect by coating with zinc or with lead, but the latter metal makes the drum very heavy. Aluminum containers are highly suitable. Chlorinated rubber could be used for lining iron, but it is a question as to whether such drums are available. *Seifensieder-Ztg.* **65,** 436 (1938).

Determining Wetting Properties

A method for determining the wetting properties of surface-active materials consists of shaking particles of solid material such as chopped rabbit hair, in a cylinder with 2 immiscible liquids, one polar and one nonpolar. E. g., an aqueous solution of Igepon or other wetting agent may be used in combination with dichloroethane. After allowing the cylinder to stand for some time, the distribution of the hair between the 2 layers is determined. T. A. Shmeleva. *Colloid J. (U.S.S.R.)* **3,** No. 3, 265-71; through Chem. Abs.

Preventing Rancidity

Natural organic materials such as fats are protected against autoxidation and rancidity by admixing natural organic pigments of the general formula $C_{40}H_{56}$, or their derivatives, known by the general name "carotenoids." Jean Verne and Charles Mille. French Patent No. 820,124.

Wetting Agents

As wetting agents in aqueous treatment baths in the paper, textile and leather industries, use is made of mixtures containing (1) a neutral ester derived from a carboxylic acid of the benzene series or from abietic acid, and a liquid aliphatic alcohol containing at least 3 carbon atoms, and (2) a water-soluble alcohol, ketone or ester, a phenol, pyridine, or a sulfonated compound. Orianienburger chem. Fab. A.-G. German Patent No. 659,181.

Chemical Oil Bleaching

OILS and fats are purified and bleached chemically by three different methods,—with lye, with acids, or with oxidizing agents. Bleaching with lye is applied both in the oil industry and for special soaps. In this method, the amount of free fatty acids is first determined and then an amount of 38°Be. caustic soda solution corresponding to the fatty acid content is stirred into the cold oil or fat heated just above its melting point. The mixture is stirred until the fatty acids are saponified and the soap has separated as flakes. The fat is now allowed to stand at rest, and if it was not too warm, the flakes settle to the bottom. They contain besides soap, water, dirt and small quantities of neutral oil. They may be used directly by the soap industry or treated with sulfuric acid for the recovery of fatty acids.

Acid purification and bleaching consists of carbonizing impurities and organic ingredients with sulfuric acid. According to the color and kind of fat material, 1-1.5 per cent of 60° Be. sulfuric acid is used. Treatment takes place in the cold or in the melted fat, with stirring with a stream of air. The sulfuric acid is added in the form of a thin stream. The oil or fat assumes a dark greenish gray color. The treatment is ordinarily completed after a half hour. A small sample of the oil is then removed to a porcelain dish for examination, to see whether the carbonized particles have clumped together and left the oil clear. The material is allowed to stand for a few hours or overnight and the oil siphoned off the next day from the precipitated dark gummy mass. It is washed several times with 5 per cent of fresh hot water until the wash water is neutral.

Bleaching with oxidizing agents includes bleaching with hydrogen peroxide. This method has often given good results when other oxidizing agents were unsatisfactory. The method is frequently combined with physical methods, the oil being treated first with bleaching earth and then with hydrogen peroxide. This chemical treatment has the advantage of leaving no residue. Wooden vessels or containers lined with lead or aluminum are used. New containers made from steel are lined with plates of stoneware. Oxidation is by means of "active oxygen." The fat or oil is treated at a temperature of about 65° C. The hydrogen peroxide (30 per cent) is well stirred into the fat in a thin stream, with stirring continued for 2-5 hours. The amount used is from 0.5 to 2 per cent, but no more than this, or hydroxy fatty acids might be formed by chemical reaction. The treatment is said to be improved by the addition of 0.1-0.2 per cent of benzol superoxide, which is soluble in fat.

Potassium bichromate bleaching is an oxidation method frequently applied to palm oil. The reagent was formerly acidified with sulfuric acid, but hydrochloric acid is often used now. In the first case, oxidation was by means of active oxygen, in the latter case by means of active chlorine. In the case of palm oil, the oil is melted, cooled to 50° C. and put in a lead-lined container. About 12 parts by weight to 1000 parts of fat, of sodium or potassium bichromate are dissolved in some water and the solution added to the fat with continuous stirring. About 50 parts by weight of concentrated hydrochloric acid are added immediately. The mass is allowed to stand a half hour. At the end of this time the oil shows a dirty gray color overlying a dark green. Stirring is stopped and 25 per cent of boiling water is sprayed over the mass. The oil is allowed to stand for 2 hours. If at the end of this time the color is still dark green, the fat is again treated with 10 per cent of fresh water and 0.1 per cent of hydrochloric acid, boiled for about 10 minutes, and allowed to settle. If the bichromate and acid are added in several portions and the fat washed with water between each chemical treatment, the bleaching effect is considerably augmented.

Bleaching with sodium chlorate is carried out similarly. From 1 to 1.5 per cent of sodium chlorate and 5-10 per cent of 1:1 sulfuric acid are used.

As mentioned, physical and chemical methods are often combined. E.g., dark fish oil is decolorized by treating first with concentrated sulfuric acid, followed by treatment with bleaching earth without previous removal of the acid with water. From 2 to 3 per cent of sulfuric acid is stirred slowly into the fish oil warmed to 30-40° C. Stirring is continued for 30 minutes, after which 3-5 per cent of bleaching earth is stirred into the fish oil which is gradually heated to 100° C. The sulfuric acid is adsorbed by the bleaching earth. *Allgemeine Oel- und Fett-Ztg.* **35,** 242-4 (1938).

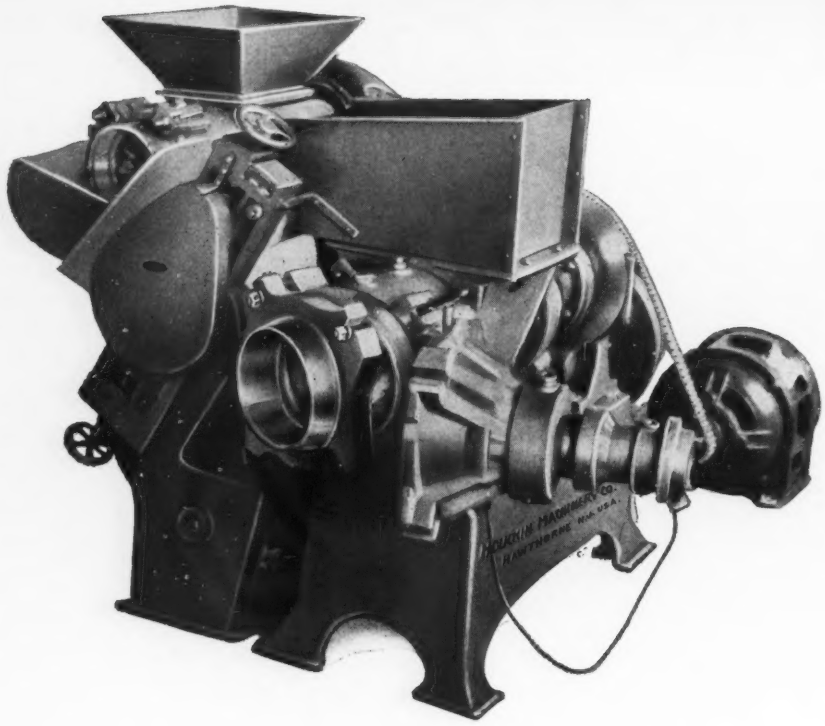
Soap Color Psychology

In an attempt to decide whether any real color preference for soap exists, 2,000 pieces of soap of various colors were distributed without charge at two bath houses, the recipient in each case making a free choice. The result gave white first place, orange-red and yellow-green tied for second, blue-green next, then violet, green, orange, yellow, red, and blue. The matter of choice in most cases appeared to be quite difficult as indicated by considerable hesitation before deciding on a selection.

In another instance 50 men and 50 women were asked to state their preference when soap cakes of 6 colors were placed before them, with results as tabulated:

Color		*Chosen by*	
		men	*women*
White	11	7	4
Orange-red	18	5	13
Yellow-green	27	19	8
Blue-green	18	12	6
Green	12	6	6
Violet	14	1	13

Examination of these figures shows that men and women do not necessarily agree as to color preference, even with an article like soap, where color might appear to be of rather minor importance to the user. Gerd Klaass. *Soap, Perfumery and Cosmetics* **11,** 542-4 (1938).



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Products and Processes

New Detergent

A washing agent with good wetting qualities consists of a mixture of soaps of hard fats, of fatty acids and water-soluble salts of acids of the general formula RArOR'COOH, in which R represents an alkyl radical containing at least 4 carbon atoms, Ar an aryl radical and R' an organic radical, with washing and other qualities. In an example, soap flakes made from the sodium soap of whale oil and the sodium salt of cresoxyacetic acid substituted in the nucleus by a secondary alkyl radical containing 6-12 carbon atoms, and wool fat, are mixed to give a detergent. Henkel & Cie. G.m.b.H. French Patent No. 823,154.

Dry-cleaning Soaps

Unsaturated aliphatic hydrocarbons are subjected to a polymerization process and then sulfated. The sulfated products may be converted into soaps suitable for the manufacture of dry-cleaning soaps, spray oil and coal-oil dispersions. N. V. deBataafsche Petroleum Maatschappij. British Patent No. 479,137.

Detergent Agents

Detergent agents are made by treating saturated alcohols having at least 8 atoms in the molecule, with a solid reagent prepared by causing chlorosulfonic acid to react with a chloride or sulfate of ammonia, or of a metal that forms a water-soluble salt with the resulting ester. The formation of the solid reagent and the esterification of the alcohols may be effected in a ball mill provided with means for removal of hydrogen chloride and for cooling. The product, if acid, is neutralized and may be purified to remove unesterified alcohols and inorganic salts.

E.g., sodium chloride or sulfate is caused to react with chlorosulfonic acid, and the ground product is caused to react with alcohols obtained by the hydrogenation of coconut oil or tallow, the product being neutralized with soda ash. This product may be freed from organic impurities by means of petroleum ether, and crystallized from alcohol. Arnon O. Snoddy and Wilfred S. Martin, to The Procter and Gamble Co. British Patent No. 479,482.

Mohua Oil Soap

Soap made from mohua oil or mohwrah fat has a marked tendency to become rancid. The soap can be greatly improved in this respect by a long period of emulsification before saponification,—the longer the emulsification time, the better the result. The pan should be diluted as much as possible so that odorous materials will have a chance to become volatilized. This oil contains 2.3-3.5 per cent of unsaponifiable matter and 17-20 per cent of free fatty acids. Soap made from mohua oil has the consistency of palm oil soap if it is properly settled. A. N. Ghose. *Indian Soap J.* **4,** 265-8 (1938).

Clay in Textile Soaps

The addition of colloidal clay to soap considerably increases its lathering and detergent properties. Clay has the further advantage of being perfectly neutral, and harmless to fine textiles. According to some workers, it acts as an emmollient. Owing to its high adsorptive powers, it may adsorb any free alkali present in the soap. *Textile Colorist*, **60,** 445 (1938).

Soap Powder

A process of producing soap powder from soap having at least the moisture content of kettle soap,—about 30 per cent, consists of reducing the moisture content of the soap to a predetermined degree substantially lower than the original moisture content, converting the partially dried soap into a plastic or semifluid mass, disintegrating the soap mass into descrete particles and solidifying the particles. Lever Bros., Ltd. British Patent No. 486,819.

Rosin Potash Soap

Soft soap based on potash, with a high content of rosin, is suitable for laundering woolens and colored clothing at moderately low temperatures. Such a soap is resistant to lime hardness. It leaves wool soft and supple, with less tendency to felting than occurs with soda soap. Laundry tests with a soft soap containing the equivalent of 40 per cent of fatty acids, of which one-third consisted of rosin, gave excellent results. It was found that the same results could be obtained with 8 parts of this soap as with 20 parts of a 72 per cent soda soap. Soft soap is therefore very economical as compared with hard soap for use at relatively low temperatures. Henri Blin. *Les Matieres Grasses* **30,** 145 (1938).

Leather Cleaner

A leather cleaning composition is made by subjecting a substantially pure commercial oleic acid containing combined iron, to the chemical action of tannic acid under conditions to form iron tannate, and to reduce the concentration of iron in the oleic acid to less than 0.001 per cent. The treated oleic acid is separated from the iron tannate, saponified to form a dry-cleaning soap, and mixed with a dry-cleaning solvent. Shell Development Co. Canadian Patent No. 375,213.

Decolorizer

A synthetic material having decolorizing properties is made by subjecting solid material containing lime and silica to reaction with a soluble magnesium compound in the presence of water at an elevated temperature, with stirring. A hydrated magnesium silicate is formed. Lyle Caldwell. Canadian Patent No. 375,406.

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Transparent Soap

A medium grade of transparent soap may be made from the following:

	Parts by Weight
Tallow	75
Coconut oil	75
Rosin W. W.	50
Caustic soda, 68°Tw. (37°Be.)	100
Industrial alcohol	80
Sugar	40
Water	40

The soap proper may be made by the semi-boiled or by the fitted process. In the former case, all materials must be the purest obtainable and the water is preferable distilled water. Also the temperature must be kept as low as possible, and plenty of time allowed for saponification. When this is complete the sugar solution is added at the same temperature as the soap. When it has all been added and the soap is thin and free from lumps, the alcohol is introduced, together with any coloring matter. Perfume is incorporated just before the soap is run into frames.

If a slightly better soap is required, the alcohol may be increased and the sugar and water decreased in the same proportion. There is considerable risk of the soap losing its colloidality and crystals forming in the center, if the sugar solution is reduced to below 30 parts in the above formula, unless the frames are very small or the soap is run into moulds. W. J. W. Fisher. *Soap, Perfumery and Cosmetics* **11,** 520-4 (1938).

Liquid Shaving Soaps

A mixture which leads to the production of a clear transparent liquid shaving soap is made from the following:

	Parts by Wt.
1. Olein	6
Castor oil fatty acids	2
Caustic potash, 50° Be	3.22
Distilled water	15
	Parts by Wt.
2. Coconut oil fatty acids	3
Triethanolamine	2
Distilled water	6
Lamepon	0.78
Alcohol	2

The fat ingredients in part 1 are first saponified, then rendered neutral by the addition of small amounts of castor oil fatty acids. Next, part 2 is prepared by heating the water, adding the triethanolamine, and stirring into this the coconut oil fatty acids warmed to 75° C. The resulting liquid should be clear, or if not, more triethanolamine is added until the mass is transparent. This is then stirred into the first preparation. The resulting soap is stored in a cool place and clarified. It has a fatty acid content of about 28 per cent.

Liquid shaving soap can be made from any good liquid soap such as a shampoo liquid, by mixing with it a triethanolamine soap or other special shaving soap preparation. Such a triethanolamine soap is made from the following:

	Parts by Wt.
Coconut oil fatty acids	10.5
Olein	4.5
Triethanolamine	8
Distilled water	10

This soap is prepared the same as the triethanolamine soap described above. To this about 70 parts more of hot water may be added with stirring until solution is complete. Of this one may add 10-40 per cent to other liquid soaps.

A liquid shaving soap saponified with carbonate is made from the following:

	Parts by Wt.
Olein, best grade	9
Distilled coconut oil fatty acids	3
Potash, 98 per cent	3.25
Alcohol	1
Distilled water	13.75

Saponification is conducted the same as with caustic potash. The potassium carbonate is dissolved in the water and heated to boiling, when the hot fatty acid mixture is stirred in. After saponification is complete and the liquid has cooled, the alcohol is added. *Seifensieder-Ztg.* **65,** 449-51 (1938).

Refining Vegetable Oils

Fatty oils, fats and waxes of the ester type are refined by extracting the impurities with amines such as monohydrated ethylenediamine, monohydrated allylamine, benzylamine and trimethylamine. N. V. de Bataafsche Petroleum Maatschappij. French Patent No. 822,176.

Hair Wash

A hair wash contains cetilic alcohol 10 parts, a condensation product of a fatty acid with a sulfonated organic derivative such as Igepon T 5 parts, sodium metaphosphate 3, citric acid 2 parts, and 80 per cent of water. The composition may also be used for washing wool, furs, feathers and textiles. Expro (S.a.r.l.). French Patent No. 823,248.

Soft Soap

Typical formulae for soft soap for summer use and for winter use are as follows:

FOR SUMMER

I

	kg.
Soybean oil	425
Water	70
Caustic potash, 25°Be.	385
Caustic soda, 25°Be.	125

II

	kg.
Linseed oil	120
Peanut or cottonseed oil	260
Rosin	60
Water	70
Caustic potash, 25°Be.	380
Caustic soda, 25°Be.	125

FOR WINTER

I

	kg.
Linseed oil	426
Water	63
Caustic potash, 25°Be.	468
Caustic soda, 25°Be.	46

II

	kg.
Soybean or corn oil	390
Rosin	45
Water	70
Caustic potash, 25°Be.	475
Caustic soda, 25°Be.	30

The 25°Be. potash lye is prepared by mixing 100 kg. of 50°Be. potash lye with 15 kg. of potassium carbonate and then diluting with water to the required strength.

To bleach the soft soap a chlorine liquor is used. This is preferable done after adjusting the soap to the desired fatty acid content. The temperature should not exceed 60°C. and still lower temperatures permit of more complete utilization of the bleaching power of the liquor. Each 1000 kg. of soap needs 6-25 kg. of 25°Be. potassium hypochlorite lye, which is diluted to 12°Be. and slowly added to the soap with constant stirring. Stirring is then continued for another 15 minutes, after which the mass is allowed to stand for about half an hour. J. Davidsohn and A. Davidsohn. *Soap, Perfumery and Cosmetics* **11,** 437-41 (1938).

New Patents

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No. 2,122,636, Soap Dispensing Device, Patented July 5, 1938 by Frank J. Cantrell, San Anselmo, Calif. A device of the character described comprising a casing having a chamber formed therein, a soap receptacle in the chamber to contain a cake of soap, a revolving brush engaging the cake of soap, means for introducing water to form a lather, means for directing air upwardly between the bristles of the brush to be beaten into the lather by the bristles as they rotate, and a discharge outlet for the lather.

No. 2,123,342, Hydrogenation of Fatty Oils, Patented July 12, 1938 by William J. Paterson, Chestnut Hill, Mass., assignor to Lever Brothers Company. A hydrogenation catalyst capable of effecting the selective stepwise hydrogenation of vegetable oils herein disclosed and suppressing the formation of iso-oleic acid, which catalyst consists of electrolytic nickel substantially free from sulphides, the nickel being prepared from electrolytically precipitated nickel hydroxide which is subsequently converted into catalytically active metallic nickel by heat and contact with hydrogen gas.

No. 2,123,647, Soap Having A Definite Water Content, Patented July 12, 1938 by Benjamin Clayton, Springer, N. Mex., assignor to Refining, Inc., Reno, Nev. In combination in an apparatus for continuously producing soap: walls forming a passage closed from the atmosphere and providing a first portion comprising an elongated reaction zone, a second portion comprising an enlarged separating zone and a third portion comprising a discharge zone; pump means for continuously introducing into first portion of the passage proportioned quantities of saponifiable and saponifying materials whereby a mixture thereof flows continuously thru the reaction zone with progressively decreasing pressure; means for heating the reaction zone to form reaction products including soap and vapor which reaction products are continuously introduced into the separating zone; means for withdrawing the vapor from the separating zone at such rate as to maintain a vacuum therein, thus separating the vapor from the reaction products to leave soap; extrusion means at the end of the passage for extruding a stream of soap delivered thereto thru the discharge zone; and pump means for continuously withdrawing soap from the enlarged separating zone while retaining same in the passage and thus out of contact with the atmosphere and against the vacuum in the separating zone without impairing the vacuum, the pump means developing sufficient superatmospheric pressure to extrude a stream of the soap thru the extrusion means after flow along the discharge zone.

No. 2,124,168, Glycerine and Fatty Acids, Patented July 19, 1938 by William H. Rees, Berkeley, Calif., assignor to El Dorado Oil Works, San Francisco, Calif. The process of extracting fatty acids and glycerine directly from oleaginous pulp material which comprises the steps of reducing the material to a finely divided paste having a low moisture content, adding a reagent to dissolve the oil content without removing the sugar and protein content of the material, the reagent comprising sulphuric acid, alcohol, a hydrolyzing catalyst, fatty acids and benzole, heating and agitating the mixture, filtering the liquid containing the oil in solution from the solid matter, adding water and heating the liquid to produce the fatty acids and glycerine.

No. 2,124,400, Insecticidal, Fungicidal, Disinfectant Material, Patented July 19 1938 by Leon C. Heckert, Pittsburg, Kans., and Charles H. Peet, Bristol, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa. As a new composition of matter a cyclohexyl thiocyanate.

No. 2,124,706, Method for Preventing Rancidity, Patented July 26, 1938 by Donald J. Maveety, Millburn, N. J., assignor to National Biscuit Company, New York, N. Y. The method of retarding rancidity in oils and fats which comprises incorporating therein a small amount of the residue from the distillation of a spice oil.

No. 2,124,707, Oil and Fat Deodorization, Patented July 26, 1938 by Roy C. Newton and Walter F. Bollens, Chicago, Ill., assignors to Industrial Patents Corporation, Chicago, Ill. A deodorizer comprising a vessel, the vessel having an oil inlet and outlet, and a gas outlet, means for admitting a gaseous medium to the vessel, the point of escape of the gaseous medium within the vessel being positioned near the bottom of the vessel within a restricted passage open at the ends, the uppermost end of the restricted passage being suitably spaced from and below the top of the vessel and beneath the oil level and means including a rotatable perforated disc mounted within the restricted passage above the point of escape of the gaseous medium for disintegrating the gaseous medium into small bubbles within the body of oil.

No. 2,124,749, Stabilization of Fats and Oils, Patented July 26, 1938 by Paul L. Salzberg, Wilmington, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Animal and vegetable fats and oils normally tending to become rancid having incorporated therein, in an amount sufficient to inhibit rancidity development, a phenol of the benzene series having at least one alkoxy group in at least one of the positions ortho and para to a hydroxyl group, the alkoxy group containing 12 carbon atoms, the phenol consisting of carbon, hydrogen and oxygen.

No. 2,124,782, Insecticidal Oil Spray, Patented July 26, 1938 by Hugh Knight, Claremont, Calif., assignor, by mesne assignments to Emulsoids, Inc., San Francisco, Calif. An anti-parasitic oil composition for application in emulsified form to sensitive foliage which comprises a refined petroleum white oil containing in solution about 5 per cent of a mixture of about three parts by weight of aluminum naphthenate and one part by weight of glyceryl oleate.

No. 2,125,099, Cleansing Article, Patented July 26, 1938 by George W. Brooks, La Grange, Ill., assignor to The S. O. S. Company, Chicago, Ill. A combined metal wool and soap cleaning pad comprising a body of metal wool with soap distributed throughout its extent in two distinct portions, one portion entirely inclosing and surrounding the other portion to provide an inner and an outer portion, most of the soap in each portion being in the form of coatings about substantially all of the fibres of the metal wool and providing voids among the coated fibres, the soap

coatings of the inner portion being of such different character from the soap coatings of the outer portion as to provide an inner soap distribution having a slower rate of dissolving and hence forming a reserve soap supply for the outer portion of the pad.

Water Hardness Tests

The palmitate method for the separate determination of magnesium and calcium in water suffers from two drawbacks. First, the magnesium is determined by subtracting the calcium hardness from the total hardness, and in the determination of the latter a somewhat indefinite endpoint is obtained in the presence of magnesium salts. Second, in the presence of material proportions of magnesium salts, calcium tends to be precipitated with the magnesium in strongly alkaline solutions. This source of error is minimized by precipitating the magnesium from boiling solution with sodium hydroxide solution within a pH range of 9.5-10.0. By titrating the filtrate with standard acid, the magnesium can be determined with a fair degree of accuracy. Alan W. Stewart. *Analyst* **63,** 493-4 (1938).

Laundering Linen

In the laundering of linen such as damask table linen, the size of the loads is of importance. It is preferable to use a somewhat smaller load for a given cylinder size than is the case with cotton. The following washing formula is for medium soiled linen in a 36 x 64 cylinder, carrying a load of 125 pounds loose.

For very lightly soiled linen, half this amount of bleach is used and the time for the break and suds can be cut to 4, 8 and 7 minutes respectively. The last rinse is followed by a sour and blue. In the formula for heavily soiled linen a third suds is included which is simply a repetition of the second,—a heavy built suds plus 3 pints of 1 per cent bleach for 10 minutes each at 4 inches. A point to be emphasized is not to heat up the break too quickly. A gradual increase of temperature will assist in the removal of many types of stains. C. H. Bayley. *Laundry and Dry Cleaning J. of Canada,* Nov., Jan. & April, 1937-8.

Operation	*Supplies*	*Details*	*Final temperature*	*Time min.*	*Water level*
Break	Cold water only	Raise slowly to 100°F.	100°F.	5	8"
1st suds.	Built soap	Heavy built suds, raise temp.	120°F.	10	6"
2nd suds.	Built soap plus bleach.	Heavy built suds.. plus 3 pts. 1% bleach raise temp. slowly	140°F.	15	4"
Rinse			140°F.	4	10"
Rinse			160°F.	4	10"
Rinse			160°F.	4	10"
Rinse			160°F.	4	10"

pH in Textile Industry

Correct pH values are of the utmost importance in the successful operation of many processes in the textile mill. A number of specific recommendations are as follows: The delustering of acetate rayon is best carried out at pH 10-11. In degumming silk, the boil-off should be at 10.5 at the start and no lower than 9.6 at the finish. Research on throwing, using a sulfonated oil, shows that the take-up of oil by the raw silk may be as high as 80 per cent at pH 6 or less, but at pH 10, it is reduced to about 20 per cent.

The minimum active pH in wool scouring lies at about 9.5, while maximum efficiency with soap and alkali is reached at 10.7, with little damage to the wool. A new method of wool scouring, used in Germany, is at 4.9, which is the isoelectric point of wool. The product used at this acid pH has not been revealed. Wool scoured at this pH shows 60 per cent higher resistance to abrasion, is a pure white, can be dried at lower temperatures, and exhibits better dyeing properties. A. R. Wallberg. *Canadian Chem. & Process Industries* **22,** 217-8 (1938).

Washing Action of Soap

The cleansing action of soap depends on its surface tension against air, the interfacial tension against the fabric and against various kinds of dirt, the frothing power and the stability of the froth. It has proved practically impossible to devise washing tests which are generally applicable, but useful data can be obtained by measuring the decrease in surface tension of water by the addition of various amounts of soap,—the frothing power and the stability of the froth at different temperatures, the wetting power for fabrics and the lowering of the interfacial tension of water against a large number of substances (drop number). It is considered that this last method is not sufficiently used in practice. S. H. Bertram. *Chem. Weekblad* **34,** 707-8.

Purifying Fats

Fats, oils and waxes of the ester type are refined by extracting with an amine free from hydroxyl groups, in the presence of water. Fatty acids, mucins, color and odoriferous constituents are removed. N. V. de Bataafsche Petroleum Maatschappij. British Patent No. 478,930.

Fat Splitting Temperatures

The splitting of olive oil and tributyrin takes place with measurable velocity at temperatures far below the point where the system is solid. No sudden change was noted in the rate of hydrolysis corresponding to the change in state. Fat-splitting enzymes are active at —15 to —30° C. and definitely have a bearing on the deterioration of fats in frozen storage. A. K. Balls and I. W. Tucker. *Ind. Eng. Chem.* **30,** 415-6 (1938).

Bentonite Activation

Bentonite is activated for filtration and decolorization purposes by boiling the clay in a dilute solution of mineral acid and then treating with a base to bring the acid compounds to a required pH on the acid side, or to neutrality. Elmore McKellar. Canadian Patent No. 375,389.

Continuous Oil Refining

(*From Page* 27)

the diaphragms. A thin stream of acid can be fed to the apparatus at the same time as the oil.

Robert Ransford[11] devised a process applicable to "oil of various kinds." In the mixers he employs, oil flows upwardly and meets the acid as the latter descends, and while thus passing, the liquids are agitated centrifugally in such manner as to mix them thoroughly while in a minutely divided condition. Periods of settling are thereby avoided.

Because there is a great difference in the specific gravity between an oil or fat and sulfuric acid, and also because the two are immiscible, it seems that three processes of refining described and stated broadly as applicable to this general type of refining and illustrated on some oily fluid should be mentioned here.

Leo D. Jones[12] takes liquids of different densities and flows said substances together over a rotor in stratified relation, reducing the cross section of one stratum so as to form a thin ring or rings therein in contact with the other stratum and centrifugally separating the liquids.

Thomas S. Cook[13] says of his method, a continuous process: "in fact, it is applicable to any treatment of one fluid with another when it is desirable to separate the resulting heavy components from light components in a short time so that secondary reactions may be prevented." The fluids are mixed and then forced through a helically constructed chamber wherein a rotary motion is given. The aqueous layer separates away from the oil layer. The stream is then admitted tangentially into a centrifugal separating chamber, the oil phase taken off at the top and the aqueous sludge layer at the bottom. The specific disclosure is on sulfuric acid treatment of lubricating oils. But passages such as that quoted above indicate clearly that the field of applicability is much broader.

A society in France took out a British patent[14] based on the idea that centrifugal force could be more effective than gravity alone provided that there was imparted to the apparatus a sufficiently high speed of rotation. Thus there is imparted to the liquids in the apparatus a movement of rotation sufficiently rapid, for their constitutents to be separated by the action of centrifugal force into distinct rings. The speed utilized causes the passage of the liquids counter current to each other from one compartment by inertia through conduits and pulverizing nozzles into a preceding and into a following compartment.

Raymond Combret[15] proposed to pass oil from below through a rose into a cylinder containing a body of purifying liquid which may be warmed by direct steam. Among the fluids his patent mentions is sulfuric acid. By putting cylinders above one another the operation can be made continuous.

Since the cousin of the fatty oil industry, namely the mineral oil industry has stressed the importance of rapid refining with sulfuric acid, the fatty oil industry might look further in this direction for a reduction in refining costs and in processing time.

Bibliography

1. Ubbelohde, *Handbuch der Chemie und Technologie der Ole und Fette*,. Vol. I, pp. 777-779.
2. Andes, *Veg. Fats and Oils*, 3rd Edition, 1917, pp. 250-253; 258-264; 273.
3. Ubbelohde, *Handbuch der Chemie und Technologie der Ole und Fette*, Vol. I, pp. 775-776, 1908.
4. Ubbelohde, *Handbuch der Chemie und Technologie der Ole und Fette*, Vol. I, pp. 775-776, 1908.
5. Hunziker, *The Butter Industry*, 1920 Edition, pp. 610; 637. *Assoc. Offic. Agri. Chem.*, 1924 *Edition, p.* 263.
6. Hunziker, *The Butter Industry*, 1920 Edition, pp. 642-643.
7. U. S. Patent No. 342,692 to Grant, 5-25-1886.
8. U. S. Patents Nos. 1,908,923 and 1,908,924 to Jean A. Schaeffer and George Pfersch, 5-16-33.
9. Br. Patent No. 2086 to Robert Scott, 1871.
10. Br. Patent No. 8475 to Paul Marix, 1891.
11. Br. Patent No. 13,441 to Robert B. Ransford, 1913.
12. U. S. Patent No. 1,575,116 to Leo D. Jones, 3-2-26.
13. U. S. Patent No. 1,951,647 to Thomas S. Cooke, 3-20-34.
14. Br. Patent No. 414,558 to Societe Establissements Lambiotte Freres, 8-9-34.
15. Ger. Patent No. 11,460 to Raymond Combret, 3-13-1880.

Hydrogenation Fire Risk

A study was made of the frequent fires and explosions during the discharge of hydrogenated fat mixtures into the settling tank. It is postulated that the fires and explosions are caused by the spontaneous ignition of the highly inflammable volatile decomposition products of the hydrogenation, on contact with the circulation hydrogen and air in the tank. Moreover, the atmospheric hydrogen, formed by a partial dehydrogenation of the oil, combines with the decomposition products of the nitrogen and phosphorus compounds to form highly inflammable gaseous compounds such as phosphine, which are spontaneously ignited, setting fire to the mixture of air and hydrogen in the tank and causing the explosion of the fat mixture. This explains the fires and explosions of hardened oils from such oils as rapeseed and linseed, which are rich in phosphatides. The proposed measures for the prevention of such fires are: Exclusion of air from the settling tanks, reduction of the phosphorus content of the oils by refining, and the use of low temperatures in the hydrogenation and the discharge of the fat mixtures. V. M. Smirnov. *Masloboino Zhirovoe Delo* **13,** No. 6, 15-16; through Chem. Abs.

Diatomaceous Earth

Diatomaceous earth is well known as a purifying agent and filter aid. It is a fine impalpable powder consisting principally of silica. Comparison of analyses of several French and American samples shows that the silica content may vary from 63 to 90 per cent in the former case, and from 74.5 to 86 per cent in the latter. Impurities which are apt to be present include 1—2 per cent each of aluminum oxide, ferric oxide, calcium oxide and titanium oxide. Organic matter may amount to several per cent,—often 5-10 per cent. The moisture content may be nil or may be as much as 10 per cent. Maurice Deribere. *Les Matieres Grasses* **30,** 117-8 (1938).

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First, pyrethrum is non-toxic to man and domestic animals. With more certainty than any brief experiments could attain, the long history of pyrethrum has established its harmlessness.

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Pyrethrum is not only effective against houseflies but against such hardier insects as roaches, clothes moths, bedbugs, silverfish and ants.

No other substance has ever been found to have the properties of pyrethrins.

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It is our belief that Pyrocide 20 is the purest form of pyrethrins commercially available. Pyrocide 20, the original standardized pyrethrum concentrate is the only insecticide base that can meet the following specifications, each one of them vital to the manufacturer of household insecticides:

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Retains its strength. Stabilized with an antioxidant that has been proved effective by laboratory tests and commercial use over two years.

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Made only with odorless base oil. Practically free from odor, except the natural floral aroma of pyrethrum. No kerosene used in Pyrocide 20.

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No increase in price for improved odor . . . improved color . . . improved stability . . . improved clarity. Requires one-third to one-half less perfume.

* * *

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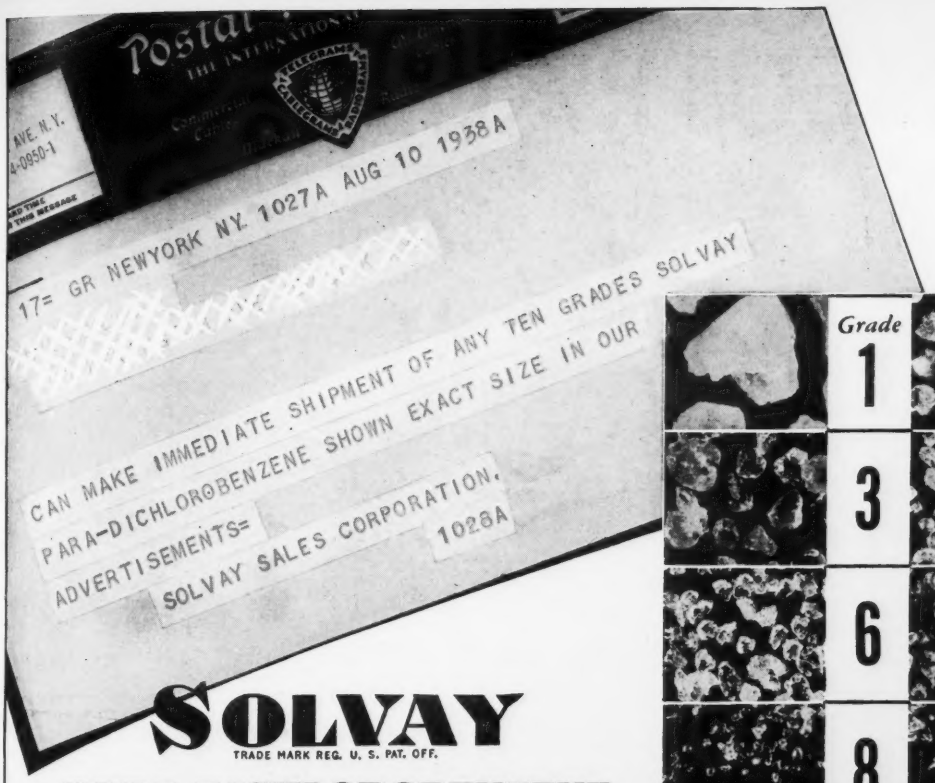

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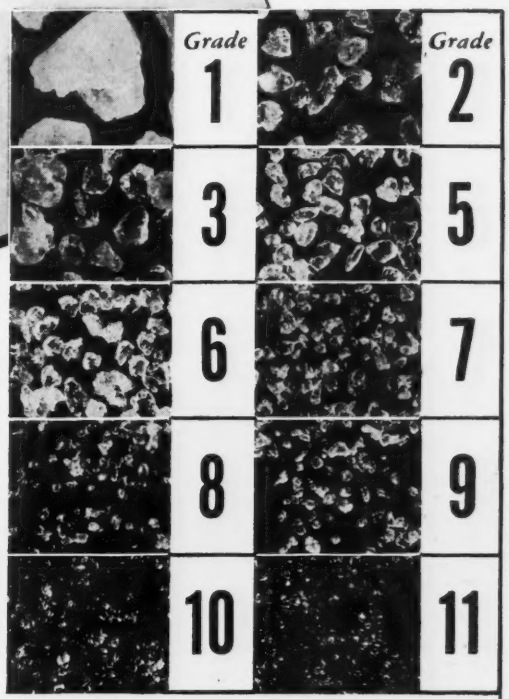

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Sanitary Products

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

FALL is almost here, and if the expectations for an expansion in business which we have heard expressed on various and sundry occasions through the summer, come true in but small part, we can state with positive assurance that business will be better. A number of firms in the sanitary products and chemical specialty fields have been sounded out of late, and reports indicate that the tail end of the summer has shown a distinct improvement over the spring and early summer months. We have the feeling based on such reports as we have heard, that consumer stocks are reduced and that this accumulation of demand is altogether likely to come into the market between now and the end of the year.

A GUILD of pyrethrum exporters has been organized in Japan with headquarters in Kobe. The purpose ostensibly of this guild is to work toward quality improvement of Japanese pyrethrum to meet the growing threat of competition from British Kenya. Enforcement of strict testing and correct conditioning will be among the first moves of the guild, which will comprise about fifty leading producing and exporting firms. A laboratory will be established for testing and research in pyrethrum.

For viewing with suspicion the formation of any organization of pyrethrum producers and exporters in Japan, we hope to be forgiven. Maybe they do intend to improve the quality of Japanese pyrethrum. After considering the quality of the material which has been shipped to the United States during the past year, we must admit that they show rare judgment in attacking this problem first. Possibly they will next go into the little matters of market rigging, price juggling, and the like. In all, we view this new guild with hope, but not much confidence. When the time comes, we shall be glad to add our plaudits, but in the meantime, we are still strictly "from Missouri".

THAT the trade treaty between the United Kingdom and the United States which was discussed so widely six or eight months ago, and heralded as a great boon to American foreign trade in administration circles, may never be consummated, is the grapevine opinion in Washington. The treaty was never liked particularly in Britain, and it has been very emphatically disapproved by a majority of American manufacturers. It was labelled exactly what it is,—an attempt to circumvent the tariff via the State Department instead of revision through the usual channels of Congress. If it is dead, as it is reported to be, there will not be any great letting of tears over its passing.

WORD from Hong Kong, Hankow, and Canton states that supplies of chinawood oil are liable to become very scarce as a result of the failure of shipments to reach the coast from interior points. The warfare in China, particularly military traffic, has quite completely snarled the tung oil situation there, and may bring materially higher prices to American users,—at least, this is the prediction in importing circles.

In Wakayama, — showing operation of removing flower heads against a background of a field in the process of harvesting.

PYRETHRUM—

A long-range view of production and markets in Japan

By Herbert Leopold
Tokyo Japan

PYRETHRUM is primarily a Japanese-American item in world trade. Eighty-five per cent of the world's crop is produced in Japan, and seventy-five per cent of the world ouput is bought by the United States. Of this latter most of it is consumed in the United States with the balance re-exported chiefly in the form of manufactured insecticide products. The importance of pyrethrum as an agricultural crop in Japan is growing owing to the steadily expanding world demand for pyrethrum insecticides not only of the household type but for agricultural purposes as well. The Japanese are not unmindful of the constant efforts through chemical research to develop synthetic substitutes for pyrethrum or the threat which these developments hold to the future of world trade in pyrethrum. Neither are they unmindful of the developments in pyrethrum cultivation in other parts of the world notably in the Kenya Colony in Africa.

Although pyrethrum was unknown in Japan slightly over fifty years ago, this country now accounts for the great bulk of the world production. The country which was the original habitat of the plant, Dalmatia, formerly an Austrian province, but now a part of Yugoslavia, today produces but ten per cent of the world supply. The third producer at the present time is Kenya Colony with five per cent,—but far more important as a potential large tonnage producer of the future and rival of Japan. But as might be expected, and as in the cases of silk and menthol, the world market for pyrethrum today is governed mainly by conditions in Japan. At the same time, its market value is a good deal dependent upon the capacity of the United States to import the product. Adding that speculation plays an important part in the movement of prices, gives the three principal factors that govern the market for pyrethrum.

As pointed out, Japan is not the natural habitat of the plant. It was first introduced into Japan in 1886 and cultivated in the herbal garden of the Tokyo Hygienic Laboratory. The Japanese Government encouraged farmers in Wakayama and Kumamoto prefectures to grow the plant on a large scale. One Eiichiro Ueyama in Wakayama prefecture imported seeds on his own, laying thus the foundations for the largest pyrethrum growing and selling organization in Japan, now known under the style of Ueyamayei. With the potentialities of the insecticide gradually recognized, large areas were cultivated along the coast of

the Inland Sea in Hiroshima, Yehime, Kagawa and Okayama prefectures.

In 1892 the Hokkaido Administration transplanted pyrethrum to the northern island, on the theory that the soil and climate there might be well suited to its cultivation. The results proved so satisfactory that the Hokkaido is now the larges producing district, although the yield is smaller than that of the southern fields. Quite recently attempts have been made to establish pyrethrum as a crop in Korea, but it would be premature to make predictions regarding the outcome of this experiment.

It was in 1898 that the dried flowers were first exported to the United States. By taking advantage of the situation which was brought about by the military occupation of Dalmatia during the World War and the shortage of Dalmatian flower, the Japanese assumed the predominant position in pyrethrum which has so far not been shaken. Two varieties of pyrethrum were originally grown in Japan, white pyrethrum (*Chrysanthemum cinerariaefolium*) and a red variety (*Chrysanthemum roseum*). The latter was found to have little insecticidal value and is no longer grown except for ornamental purposes.

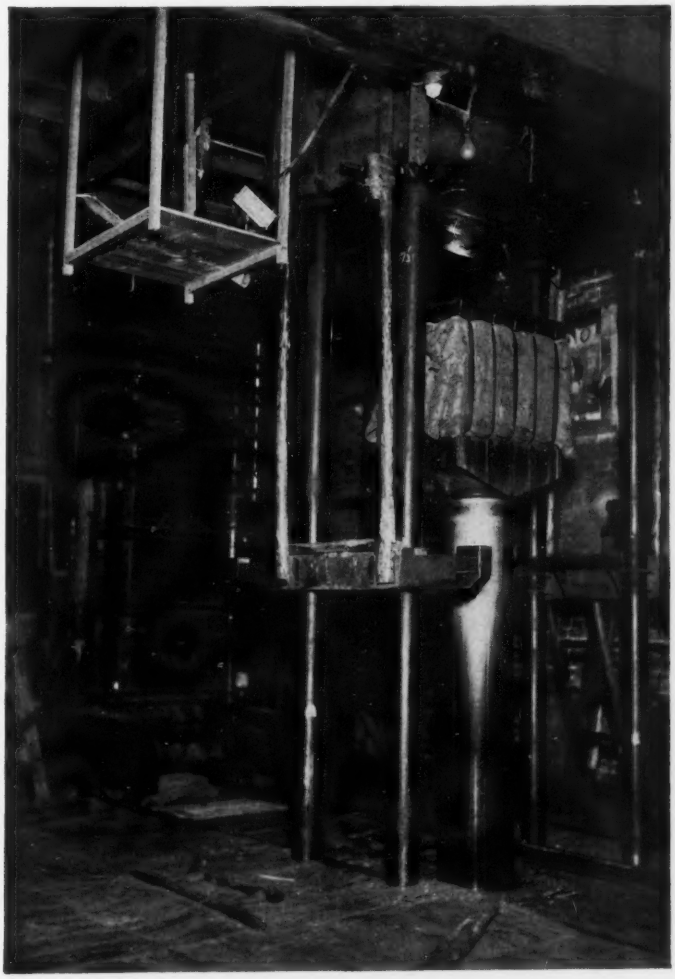
Pyrethrum is started from seed and is handled very much like tobacco or celery. The sowing season is around September. The seedlings are transplanted the following April. No crop is secured the first season, but a good bloom may be expected in the second year. In the third year, the first crop is secured, usually 100 kilograms of flowers per "tan" (about one-fourth of an acre), depending on the distance at which the plants are set apart in the seed bed. This is usually one foot.

The Hokkaido plants are harvested in July. In Wakayama and other southern districts, the harvest is in June.

Great care is exercised to harvest the flowers at the proper degree of opennes, since the phase of bloom has a direct bearing on the toxicity of the product. Theoretically speaking, it would be best to pick all flowers one by one as they reach seventy to eighty degrees of openness. This however, is not practicable on a large scale because even the cheap Japanese agricultural labor would be too expensive in relation to the cost of the product. The usual practice is to start harvesting, either manually or by machine, when the bowers are about three-fourths open.

There are varying proportions of flowers in the cut which are ninety or even a hundred per cent open. This is significant because there is an increase in weight of as much as hundred per cent between the three fourths and fully open stages, while the pyrethrin content increases only slightly toward the end of the bloom period. In other words, a given volume of fully open flowers contains less pyrethrins than three-fourths open flowers, and the larger the proportion of fully open flowers in a bale, the lower its actual toxic value.

The harvested flowers are spread out on rice-straw mats and dried slowly in the shade, as sun-drying tends to lower the pyrethrin content. In some large factories, the plants are dried in a desiccator, application of moderate heat having no influence on the toxicity of the pyrethrum. Shipments of dried baled flowers account for three-fourths of the entire pyrethrum exports. Another export item is uncompounded insect powder obtained by grinding



Baling press in operation. One bale consists of four bags of rush-mat, containing 50 kilograms of dried flowers. There are broad frames at each end, the whole being held together by seven iron hoops, of which five are already applied in the phase shown in the photograph.

the dried flowers and sifting the powder. An important article in Japan's domestic trade and in exports to South Sea countries is the "katori-senko" (joss stick or spiral), which is mainly used against domestic insect pests such as mosquitoes and flies.

BEFORE discussing the crop situation, it should be pointed out that a crop report in pounds is meaningless without analyses from various producing districts, as the buyer is not interested alone in the amount of dried flowers he gets for his money, but also in the pyrethrin content.

Although through proper care in harvesting and drying, the pyrethrin content can be controlled to a large extent, there are other important factors which are beyond the control of the producers, for instance, the amount of rainfall in the plantation areas. The average pyrethrin content of the crop therefore varies from year to year.

The past season established an exceptionally fine record in this respect,* with the pyrethrin content of plants ranging from 1.19 to 1.33 per cent (flowers dried at 100 degress centigrade). It is too early to obtain data for this year, but indications are that the net content will be appreciably lower, on an average, although certainly above the "F.A.Q.," which is, as a rule, 0.9 per cent.

According to data furnished by the Department of Agriculture and Forestry, output of pyrethrum flowers in 1937 amount to 159,350 "kin" (1 kin equals 1,323 lb. or 0.6 kg.), against 184,211 kin in 1936 and 212,427 kin in 1935. The decline is ascribable to the fact that many plants on Hokkaido have superannuated and are being replaced by new seedlings, which will yield no crop before 1939. Output in Korea is yet rather limited and annually accounts for no more than one per cent of the production in Japan proper.

Pyrethrum harvesting in Hokkaido, northernmost island of Japan, and largest pyrethrum producer.

The acreage planted to pyrethrum is estimated at 25,000 "cho" or about 63,000 acres, of which more than 70 per cent is located on Hokkaido. However, output on the island account for only 40 per cent of the total production.

According to data supplied by the Naigai Jochukiku Co., Ltd., crop estimates for the current year and crops for 1937 as well as the acreages under cultivation are tabulated below:

	Acreage in "cho" (2.45 acres or 0.99 hectare)		Quantity in "kwan" (8.27 lb. or 3.75 kg.)	
Districts	1937	1938	1937	1938
Wakayama	1,380	850	260,000	198,000
Kyushu	500	800	100,000	150,000
Hokkaido	19,500	16,135	1,040,000	1,133,000
Yamaguchi	700	1,500	150,000	300,000
Kagawa	980	820	190,000	145,000
Ehime	1,850	1,600	360,000	353,000
Hiroshima	2,200	2,410	573,000	600,000
Okayama	1,100	950	140,000	220,000
Total	28,210	25,065	2,930,000	3,099,000

If these estimates come true, there will be a slight increase this year in the output over the preceding year, although the acreage under cultivation has shrunk by approximately 3,000 "cho" or 7,500 acres.

Turning to the export situation, we find that Japan last year shipped 20,722,000 kin of pyrethrum products representing a value of 10,598,000 yen, a striking increase over the 13,120,000 kin valued at 4,847,000 yen in 1936. Of the total, dried flower accounted for 14,741,000 kin valued at 7,693,000 yen, insect powder for 1,604,000 kin valued at 935,000 yen insecticide smudge sticks and spirals for 1,268,000 kin valued at 2,777,000 yen and liquid insecticide for 1,600,000 kin valued at 702,000 yen. It is to be noted that liquid insecticide was first itemized in 1937 trade returns of the Department of Finance, Tokyo, no doubt owing to

*Based on numerous analyses of samples of 1937-38 Japanese pyrethrum shipments to the U. S., reports indicated that the pyrethrin content was 20 per cent to 30 per cent *below* the average of previous years and far under the 0.9 per cent usually taken as F.A.Q. In fact, pyrethrum extract manufacturers in the U. S. state that 26 up to 29 pounds of ground flowers were required this year to produce a standard 20 lb. pyrethrum extract. (See *Soap*, Dec. 1937, pg. 107.) The author's report that the "past season established a fine record" in the matter of pyrethrin content is exactly opposite to the facts as we found them. The 1937-38 crop established the *worst* record in the history of the shipment of pyrethrum to the U. S.—The Editor.

the increase in its shipments in recent years.

The remarkable gain in value last year is partly to speculative purchases by American traders after the outbreak of the Sino-Japanese hostilities, and partly to the insertion of liquid insecticide in the trade figures. Exports of dried flowers, the most important item, are classified by destination below.

The most important port of shipment for pyrethrum is Kobe; its busiest season, January and February. Shipments from the Hokkaido are made between July and October. In view of the inconveniences that are involved in shipments via Kobe, the Hokkaido Administration has been encouraging growers on the island to ship their output directly to the United States. The port of Otaru, Hokkaido, is gradually emerging as a powerful rival to Kobe.

The Hokkaido Administration also sponsored the organization of the Hokkaido Pyrethrum Manufacturing Industrial Guild (Hokkaido Jochukiku Seihin Kogyo Kumiai), whose head office is in Sapporo. As the name of the guild implies, its principal object is the promotion of manufactured pyrethrum products, as distinct from the unprocessed dried flowers. It is largely due to the efforts of the guild that exports of insect powder, spirals and liquid insecticides have developed at a steady pace in spite of the fluctuations in the shipments of dried flowers.

The guild is capitalized at 500,000 yen by joint subscription of the leading five producers in the Hokkaido. The Hokkaido Industrial Laboratory assigned to the guild the rights to its patented pyrethrin concentrating process, by which the guild is manufacturing its extracts, one of which is stated to have a guaranteed pyrethrin content of 15 per cent.

No discussion of the pyrethrum situation is complete without a few words concerning the speculative factor in the trade. Speculations and price fluctuations are a feature of many agricultural commodities, but in the case of pyrethrum they assume proportions which are sometimes amazing.

For instance, in the bumper-crop year 1935, quotations per "kwan" ranged from Y2.78 to Y3.04, while the following year, in spite of a poor crop, saw quotations slip off to Y1.90 to Y2.04. The highest price on record was Y5.80 in 1922, and the lowest, Y1.60 in 1931. Going over the crop reports of the Department of Agriculture and Forestry for these years, one will find little support for these tremendous fluctuations from the output angle which is usually a decisive factor in the development of market quotations for agricultural products.

IN ORDER to get a better approach to the situation, it is important to bear in mind that in most years Japan is producing pyrethrum in excess of the normal demand at home and overseas. To illustrate, in 1935 Japan exported only 12,775,000 kin out of a total production of 21,242,700 kin; in 1936, 9,347,300 kin out of 18,421,110 kin; and in 1937, 14,470,700 kin out of 15,935,000. So in spite of the extraordinary rush of orders and a poor crop, even last year registered an excess of production over exports. The aggregate excess during the past three years figures out to 18,730,800 kin.

It is estimated that consumption at home in any given year does not exceed 3,000,000 to 4,000,000 kin (exact figures being not available), so that, with the exception of last year, the total demand (domestic plus overseas) falls short of the available production. Stocks held up to the end of 1936 must have been considerable, and certainly sufficient to equalize speculations on output.

However, the stabilizing influence which the carry-over ought to exert on the market is largely offset by two factors:

The traders in Japan, who are cooperating with and in many instances controlling the pyrethrum growers, find it often more profitable to tighten up on the supply than to sell, however large stocks may be, because from time to time, old plantations have to be replaced by new ones, which they know will yield no crop for three years. In fact, it depends on the prevailing market conditions and on the instructions from the traders whether a plantation will be renewed after four, six or eight years. This procedure is facilitated by the whole setup of the trade, which is controlled by a small number of powerful business concerns of considerable financial resources.

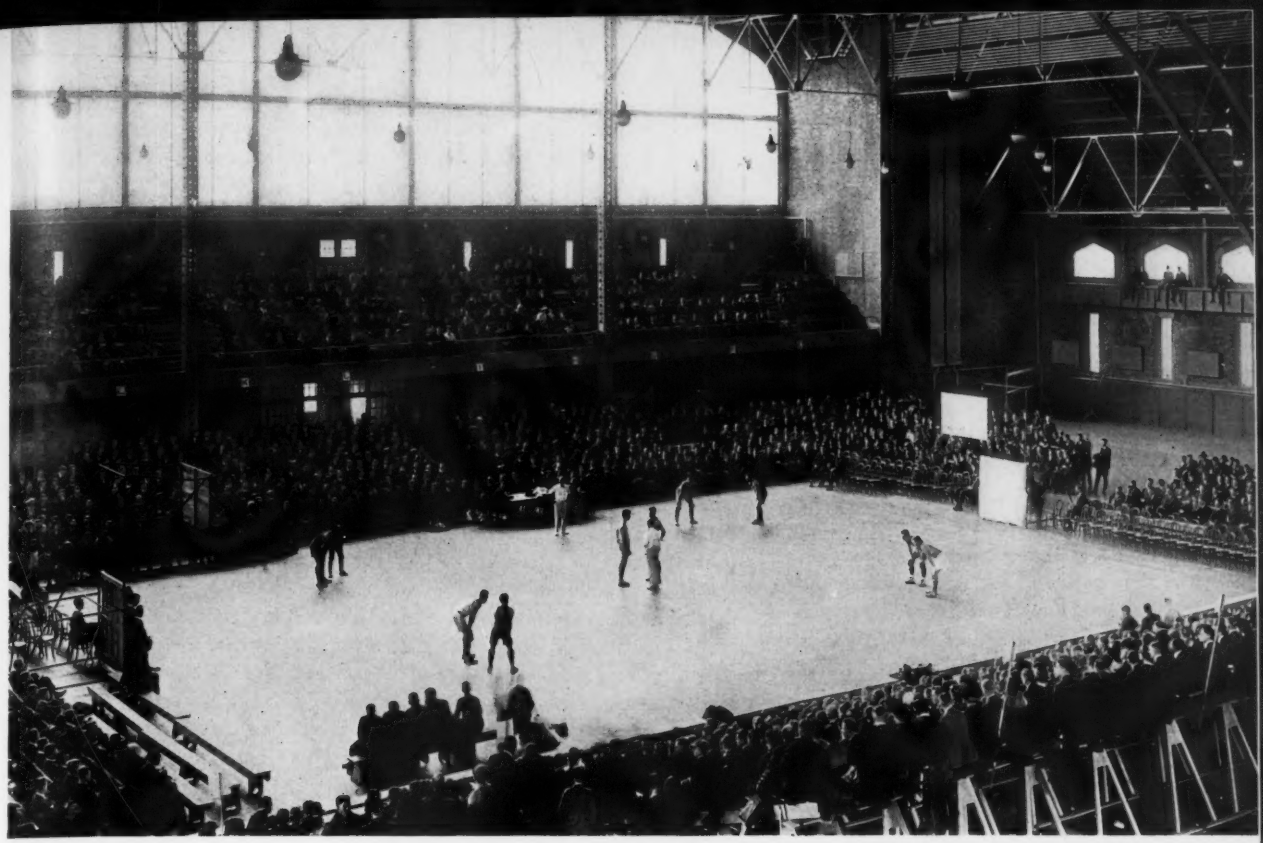
The other reason for the violent price fluctuations is of an even more complex nature. In formulating his plans for the next season, the American buyer has not only to take into account all the "inside dope" he can get out of Japan relative to the forthcoming supply (dope sheets are available at 50 yen apiece from a foreign source in Kobe), but he naturally speculates with the market trends in the United States, notably the agricultural outlook, and on possible changes in the international political and monetary situation.

The writer found that the Japanese side of the trade is unanimous in putting all the blame for the dislocation of the market on the speculative disposition of American buyers, but it was also admitted that the secretiveness of the Japanese in regard to their supply has gone a long way towards encouraging speculative transactions.

The heavy drain on the Japanese stocks continued from the latter half of 1937 through the first months of 1938, the inflationary monetary situation in Japan and in particular

(*Turn to Page* 105)

	1937		1936		1935	
	Quantity 1,000 kin	Value Y1,000	Quantity 1,000 kin	Value Y1,000	Quantity 1,000 kin	Y1,000 Value
U. S. A.	13,174	6,879	8,435	2,885	11,710	5,809
Britain	127	57	109	36	97	38
Honkong	283	157	131	47	282	160
Australia	220	94	111	41	108	44
Others	938	507	561	197	579	350



FLOOR SEALERS

By Dr. C. A. Tyler

ALTHOUGH various types of materials designed to seal wooden floors against water and other materials which might stain or warp the wood surface, have been used for many years, it is only within the past few years comparatively that the newer modern floor sealing compositions have really come to the fore commercially. Much progress has been made in their manufacture and use. Better products have given better results which in turn have brought expanding demand. Today, they stand as one of the more important types of materials used in the maintenance of floors.

Modern floor sealers are varnish-type compositions applied to flooring material to protect it against attack by water which would result in swelling, and in general to make it more resistant to wear and other deteriorating effects. As applied to wood, the purpose of a floor sealer is to penetrate into the wood itself, which is more or less porous. It therefore not only fills in the surface pores of the wood but surrounds the fibers to a greater depth, thus continuing the protective action as the surface of the wood wears down. Most sealers will penetrate wood to a depth of 1/16-inch and at least one on the market penetrates as much as one-quarter-inch.

The old type of floor sealer consisted of fossil resins combined with linseed oil. A later development was to replace these resins with ester gum, and linseed oil with chinawood oil, that is tung oil. This resulted in lower-priced products, as ester gum is much cheaper than fossil resins, although chinawood oil is more expensive than linseed oil. The use of chinawood oil greatly improved the quality of the product as it gives a more flexible film free from microscopic cracks, and one that dries more rapidly. The presence of cracks in the finish permits water to penetrate through, causing white spots. Chinawood oil is still the most suitable single oil for the purpose, although a small proportion of other drying oils such as linseed oil, perilla oil or oiticica oil may be combined with it.

Synthetic resins were gradually introduced into floor sealers and finishes, as they give a harder and more durable finish than does

[1] Carleton Ellis, "The Chemistry of Synthetic Resins." Vol. I, pp. 816-7. Reinhold Publishing Corp., New York (1935).

ester gum. Several kinds of resins are used, including phenol-formaldehyde, phthallic anhydride, modified phenolic and various other types. These resins must be light in color so that when applied to a light wood floor, the latter will not be appreciably darkened. The oils and resins are dissolved in a volatile solvent, such as V. M. P. naphtha. The drying oils and resins are first cooked together. What is produced chemically is impossible to determine. A chemical reaction is believed to occur between the drying oils and the resins. Polymerization and physical aggregation also occur during the cooking. Expert varnish cookers know from experience when the mixture is sufficiently cooked. In practice, this is not easy to determine, but the process is coming more and more under scientific control. After the heating is over, the solvent is added. Such a product tends to form a skin on storage, so that antiskinning agents are often added.

Sealers must be light in color and very fluid. Some manufacturers do not differentiate between sealers and floor finishes. They may recommend that their product be diluted with 50 per cent of solvent, or with 10-25 per cent of solvent when applied as a first coat. Some recommend that their products be applied without dilution. This would result in the use of more of their product to do the job, but it is not the most desirable procedure from the point of view of results. Less viscous liquids will penetrate the wood better, which is the real purpose of the first coat or sealer coat. Actually, it is advantageous not only to reduce the viscosity,—but the composition of the sealer may be made to differ from that of the finish. This is because it is not necessary for the first sealer coat to have the toughness that the finish should have. Therefore ester gum can be used to advantage in the sealer in place of a synthetic resin which might easily cost five times as much. It is good economy to use an inexpensive composition in the sealer, which will then be covered with the more durable finish. The sealer fills the pores and prevents the finish from striking in, so that the latter may be used more economically. The sealer should be in the wood, the finish on the surface.

The following formula is illustrative of the composition of an ester-gum varnish.[1] The chinawood

Chinawood oil.....	45 gal.
Linseed oil.....	5 gal.
Ester gum.....	100 lb.
Rosin	50 lb.
Litharge	1 lb.
Cobalt acetate	¼ lb.

oil may be raw or prepared. It is processed by heating to 200° C. for 1½ hours and then allowing to settle to remove albuminous matter. The linseed and chinawood oils form a suitable mixed oil base. Rosin is a blending agent and also supplies part of the resin content of the product. Litharge and cobalt acetate combine with free rosin to form lead and cobalt rosin soaps, which serve as drying agents.

The chinawood and linseed oils are mixed and heated to 150° C. The litharge is added and the heat raised to 230° C. to body the oil. When it begins to thicken, the rosin and ester gum are added and the heat raised to 300-315° C. The mass is then allowed to cool and cobalt acetate added at about 230°. Thinner is added at about 215° C. With this particular formula, 50 per cent of thinner was added consisting of three parts of turpentine to one part of naphtha. The quantity of thinner to be added is chosen so as to give the desired total solids content. The thinner is the only volatile ingredient, all of the other ingredients therefore make up the solids. To obtain a product containing 30 per cent of total solids, one part of the above should be combined with 2.33 parts of thinner. For sealers, the solids content may vary from about 20 to 35 per cent. For finishes, the solids content should be higher, possibly from 35 to 45 per cent.

The rather soft ester-gum varnishes may be made somewhat harder by including in the formula 10 per cent of an oil-soluble phenolic resin. Ellis states that addition of chloronaphthalenes such as halowax will make an ester gum-chinawood oil varnish more water-resistant. In the formula above, the chinawood oil was heated and allowed to settle before being used. Another method of preparation is to heat the chinawood oil with boric or oxalic acid, which allows polymerization but retards gelatinization.

The driers commonly used are lead, cobalt and manganese soaps, a mixture being more effective than a single soap. The soaps may be oleates, linoleates, resinates or naphthenates. Cobalt soap is said to be more apt to cause skinning of the varnish when stored, than soaps of lead or manganese. A suitable combination of the latter is 0.05 per cent of lead plus 0.01 per cent of manganese, added to a varnish formula. An antiskinning agent may be added if desired, consisting of 0.3-1 per cent of cresol. Addition of an inhibitor such as eugenol or *alpha*-naphthol in the presence of a drying agent, has also been used to prevent skinning.

A bakelite-chinawood oil product may be made by heating 200 parts of oil-soluble bakelite with 100 parts of chinawood oil at 210° C., until a small portion remains clear on cooling and can be diluted with cold linseed oil. More chinawood oil is added while keeping the temperature above 200° C., then thinner and drier. Some varnishes contain one part of resin to two parts of chinawood oil. This varnish is superior to an ester-gum varnish in that it dries more quickly and gives a harder film which is at the same time more elastic and more durable.

Fungus growth in wood is quite common and quite destructive, resulting in decay. Since a sealer is going to penetrate into the wood, some manufacturers add preservatives or germicides to floor sealers. One manufacturer describes his product as containing "a deep-penetrating, life-giving substance that checks dry-rot and decay." It is probably wood creosote, consisting of a mixture of various phenols.

The examples given represent the inexpensive but soft type of sealer, and the expensive but more durable type of finish. Numerous

products are possible, varying in cost and in properties, between these two extremes. Some manufacturers cook their sealers at relatively low temperatures in order to avoid heavy bodying and to aid penetration. Modification of the above ester-gum formula might be desirable with this point in mind. Some manufacturers prepare very quick-drying products by selecting resins to give flexibility so that very little drying oil need be present. Such a product consists essentially of resin and thinner.

WHEN an old wood floor is to be refinished, all previous paint or other finish must be removed. The floor is then preferably sanded, cracks filled, etc. New floors are sanded before the sealer is applied. Before ready for finishing, obviously the floor must be absolutely clean, dry and free from sawdust or sand. Floor sealer is then applied by *pouring* a small amount on the floor and spreading it with a lambs' wool floor mop or a rubber squeegee. The object is to have an excess of the liquid on the floor so as to let the wood absorb all it will. For this reason, the sealer is never applied with a brush. The liquid is left for a half hour or less and then the excess removed with dry cloths or burlap. If dry spots show up within this time, more sealer should be put on, so that an excess is present throughout the absorbing period. This method of treatment is to insure maximum penetration over the entire area.

The next step in producing a "heavy-duty" finish such as is commonly used in department stores, schoolrooms, factories, etc., is to buff the floor with steel wool. This may be done while the finish is still soft by buffing at the end of two hours after the excess liquid was wiped up. Or the sealer coat may be allowed to dry completely and then buffed with steel wool. If desired, a finish coat can be applied immediately after the buffing operation. Some "service" floors such as in factories, schools, etc., receive only the so-called "heavy duty finish," which is a floor sealer.

With hard woods such as maple, birch and beech, a coat of sealer and one or two of finish are enough. Oak is a much more open-grained wood and soaks up more sealer, so that two coats may be necessary. Oak is upon occasion treated with a sealer containing silica. The silica fills in the surface pores and gives a harder, more durable surface than could be obtained otherwise. Soft woods like pine should be pretreated with a filler containing silica.

A common type of floor finish other than the heavy-duty is the gymnasium finish. Sealers may be used in the same way in both cases. The method of application generally differs with the gymnasium finish in that buffing with steel wool is omitted. The finishing coat or coats for the gymnasium floor should be of the best quality. Bakelite-chinawood oil varnish is particularly suited for this application. The film formed on the floor has to be tough, non-slippery and resistant to rubber burns. The composition mentioned appears to be most satisfactory in meeting these requirements. An ordinary heavy-duty finish is not necessarily of this high quality.

Floors which are sealed and finished may be waxed if desired with a water-emulsion wax. However, this is altogether optional. An extra film of wax on the surface adds to the wearing qualities in areas subject to heavy traffic. At the same time, it naturally tends to make the floor more silppery. Waxing may be resorted to in the case of stores, factories, schools, and the like to give added wear and the self-healing effect of a wax, but gymnasium floors are not waxed after finishing for obvious reasons. They must present a firm footing, and a wax coating would make them far too slippery.

Some products have been tried out without too much success which were designed to combine the varnish finish with a floor wax effect. These materials were a combination of hard waxes with a synthetic resin in a drying oil, and in some instances in a volatile solvent. In fact, a proposed Government specification, discussed later, appears to call for products of this type. However, where wax is used in connection with the newer floor treatments, it is designed for use separately in water-emulsion form after finishing, according to advices from the trade.

THE U. S. Treasury Department has issued tentative specifications for the procurement division with regard to floor finishes. Products to be used are divided into three types, (1) sealers containing resins and drying oils, (2) "under-coaters" containing varnish gums and waxes, and (3) a finish material consisting of water-emulsion floor wax. The "under-coaters" in these specifications are really top finishes. As the solids in them, other than drying oils, consist of 10 per cent of varnish gums, 15 per cent of mineral waxes, and 75 per cent of vegetable waxes, it will be seen that the government "under-coaters" have little or no relation to the type of product discussed in this article.

The specified floor sealer refered to under (1) for wood floors is described as "a clear, thin liquid of amber color showing no separation or sedimentation. It shall be composed of 26 per cent or more of non-volatile matter consisting of resins and drying oils held in liquid form by volatile thinners. It shall be of such a nature as to permit application with a lambs' wool mop and give quick penetration. It shall spread evenly and thinly and shall dry hard within 12-14 hours after application. The acid number shall be not more than 4. The distillation range of the solvent shall be between 130 and 210° C. The specific gravity of the solvent shall be between 0.75 and 0.79 at 20° C. It shall meet a water test."

For treatment of ordinary wood floors, the specifications recommend application of the sealer described, buffing with steel wool followed by the application of two coats of "under-coating" and one coat of the wax finish material. This represents a heavy-duty finish so far as

(*Turn to Page* 107)

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The BUYER views your SALESMEN

By A. G. Burks*
Purchasing Dept., Indiana University

WITH some hesitancy, I accepted your president's invitation to appear here. My hesitancy springs from the hazards involved, although you may wonder wherein there is any danger in addressing one of your meetings. Consequently, I ask you to consider for a moment my side of the picture and think of the predicament in which I am placed if I *do* say anything that may be helpful in battering down the opposition of some obstinate purchasing agent. Remember that I am of that group which is ordinarily on the receiving end, and that there are sometimes occasions when I am in the company of a large number of individuals who are in similar positions. I refer, of course, to those individuals who, by most any salesman's statement cannot be convinced by the most logical of arguments, and who are so enigmatical that even though they may be slightly swayed, they never say so. In most instances they say nothing, or if they do say something, it does not mean anything.

Imagine the kind of treatment I may expect if I give you any information that will enable you to understand what goes on in a purchasing agent's mind. Such information might put some buyer at a decided disadvantage in a tussle with some salesman. That is my only reason for saying that I am in danger, for if I win here, so to speak, I am sure to lose the next time I have occasion to be in a meeting where there is a number of buyers. They probably would accuse me of going over to the enemy, and would call me a traitor for disclosing their vulnerable points.

In making such statements as the foregoing I am afraid that I may have left the impression that there is a constant battle being waged between salesmen and buyers. I admit that I had that intention at the time, but I now wish to try to correct this impression, for I should say there is a constant struggle between *some* salesmen and buyers. Some salesmen unintentionally get themselves involved in a battle only because the buyers feel that there are many adversaries who are very poorly equipped for combat, and annihilation will be easy. Annihilation in this instance can be said to mean just about the same thing as the word usually implies. The buyer wants to get rid of the salesman, and in doing so, he tries to handle the situation in such a way that he insures himself against a return call. This may be accomplished by being outspoken, in words polite or otherwise, but I think it is usually done by carefully refraining from giving any encouragement whatever.

Now let us consider another type of opponent. If a buyer feels that a salesman is armed with all the latest and most effective weapons, he will have very little desire to start a fight. In fact he will probably make a special effort to live with him in peace and will begin negotiations for trade agreements or in some manner indicate his desire to be cooperative. It is with this latter type of representative that we should be chiefly concerned, but it may be necessary to think briefly about both.

When I refer to the salesman who is well armed you of course know that I am referring to the man who is well armed with information about his products, the conditions necessitating them, and how they should be used. He should also know the conditions that exist in the institution or plant of the buyer on which he calls. I cannot over-emphasize this last statement. I realize that it is often next to impossible for a salesman to determine the condition of a buyer's physical plant, for the doors are often locked to him. However, he must gather such information by some means if he is to be of real service. There are rare instances in which the buyer calls a salesman in and explains in detail the conditions in the physical plant and the problems that may have arisen. This of course indicates that there is a realization of the need for a service of some nature. I believe that I can safely say, and this is almost a confession that should not be made, that we are all too often too close to the situation to realize that there are some junk heaps in our backyards that have accumulated so gradually that we do not have any conception of how unsightly they may be to the person who may be seeing them for the first time.

I could refer specifically to certain sanitation problems that to some of us on the inside appear to be inconsequential, but I am sure all of you know from your own experiences of many of these same problems that have been very costly to some one else who did not clean up his backyard in time. The problems which appear smallest to us are those

* Address before 24th mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June, 1938.

that actually do not exist as such. I refer of course to those problems of sanitation and cleanliness which might be classed entirely as prevention. Remember that any expenditures which are made for prevention are considered as just so much overhead, and tangible evidence of value received can never be pointed to. Here then arises the thought that I should like to have you remember. It almost works around to the point where it is your problem to make us realize our own need.

We are never eager to admit that there are conditions in our houses that should be remedied. That would be an admission that we are either bad housekeepers, or that we do not know as much as we should about our own institutions. But somehow, you must bring to our attention in a forceful way, the necessity for correction, and more important still, the necessity for prevention. In connection with the latter, I might say that it is very difficult for us to see why we should spend our employers' money, whether our employers are public or private, for something that does not pay dividends in hard cash. I mean that we prefer to buy something that may be pointed to with pride and with the expression that it sure looks as if that article has the appearance of being worth the money we paid for it.

To be a little more specific I might point out that if an institution never had an epidemic or an outbreak of some kind that is a result of some kind of unsanitary condition in a shower room, or a toilet room, or elsewhere, then it is rather difficult to see a reason for spending money for prevention of such an outbreak. That is why I say that it is so important for you who know to make us realize our own needs.

You have undoubtedly spent much of your time in trying to do just this, for it is one of the first steps in the making of a sale, and it is rather illogical for me to try to tell you how to make sales. Nevertheless I shall try to give you a few of my own opinions that I believe would help you to make sales to us a little easier.

LET us now go back and refer to the well-armed salesman. In those instances in which we have an obvious problem, he is the one that we remember and call in. If it is a case of the salesman making us realize our need when we did not know it existed, it is again the same well-armed salesman that is able to convince us. You may wonder how we can know this man; how we know which one to call in; how we know which one should be permitted to make a complete survey of our plant. Unless you are engaged in some work connected with buying, you may not realize that it is happening, but there are some who are eliminating themselves in a very positive way. There are some men who are out trying to sell merchandise or service who admit they are just starting with this or that company and that they know little about their product other than what they are able to read from the catalog. At this point they proceed to lay this particular catalog or leaflet in front of us and let us hurriedly learn as much about it as they themselves know.

I do not mean to say this next in an offensive way, for I want you to be sure and regard this as constructive criticism when I say that there are far too many salesmen calling on the purchasing department employees of this country who do not know enough about the product they are selling to be of any personal service whatever. The only thing they can hope for is that the reputation of their company may sell a product and this product will prove so outstanding in quality that repeat orders come without personal service in the nature of instruction in use and follow-up. Such a sale is seldom possible, for it is almost as impossible for such a man to get an order as it is for a catalog to get an order, and my guess is that very few orders are mailed in exchange for the receipt of a catalog through the mail. The only advantage he may have over a catalog is that he might get an order by appealing to sympathy, but I have never thought this was any proper basis for placing business.

I might mention again the thought about sales on the basis of company reputation. Nothing can do more to destroy a good reputation than a salesman who knows nothing about his company or products. Remember there is a rather worn expression that the salesman out in the territory *is* the company so far as those individuals he calls on are concerned. Our impression of any concern cannot but be influenced by the man who represents it. If he knows nothing, we tend to get the impression that the company knows little that would help us. In passing I might mention another thought that is probably rather obvious to you. If you want to get so personal as to advise representatives to give a little thought to their personal appearance, you might be doing them a favor. I do not infer that every one of them should be a fashion plate, but I do feel that if they are calling in offices as business men, they should look the part. I realize that the selling of maintenance and cleaning materials and related products often necessitates demonstrating the products under circumstances that can very easily result in soiled clothes. But surely there is some way of protecting clothing with coveralls, or by some other means, so that when a man makes a call as a sales representative he does not look like a workman. Surely one who is preaching cleanliness should look as if he is practicing it.

Before leaving the salesman who leaves a bad impression of the firm he represents, I should like to mention that even though this man may represent a jobber, the manufacturer of the product, if he is known, is in some danger of suffering from sullied reputation if the man trying to sell the product is ill-informed. For this reason, I would urge you to think not only of the kind of representation you are getting by your own employees, but, if you use jobbing outlets, it might be well to con-

sider whether or not your product is being sold by individuals who are trained properly. This also brings out the thought that there are many jobbers who have a very high personnel turnover. I don't believe I need to tell you that after three or four floaters have each made a single call, all representing the same jobber, we decide that the possibility of receiving any help in the nature of personal service is rather remote. This may be something over which you have no control, but if you consider it of any value, you might want to pass it on to your jobbing concerns.

A few moments ago I mentioned the salesman who is ill-informed. I really should not have referred to such a representative at that time. When I speak of the ill-informed, I am really speaking of a different class than that referred to as uninformed. The ill-informed can actually do more harm than the first group discussed. I am thinking of the man who talks with the air that he knows all there is to know about his products and those of all other manufacturers, and then ends up by making remarks that the buyer sets down with the idea that he will do a little checking to determine whether or not everything that has been said has been uttered with a high regard for veracity. Needless to say, if any remarks prove untrue, that man's chance of selling merchandise to that prospect is practically nil.

I remember that a representative once called on me who during the course of his first visit made a statement that his company sold one of the largest corporations in the country everything they used in his particular line. The remark sounded harmless enough on the face of it, but he had made a few other statements that sounded questionable to me, so I decided to determine if he had told the whole truth in regard to the large corporation, for I knew an easy way to find out. I found that he had not come close to the truth, and he admitted on his next call that he had not, and that the remark had been made to make an impression on me. I assured him that it had, an before the interview ended I also assured him that he was wasting his time, and that I would probably take the same attitude toward any representative of his company that might call on me in the future.

This may have been extreme, to condemn the company for something one representative had said, but I can have no confidence in any organization that permits those who are contacting the public to make remarks that will not stand inspection. There are enough reputable companies in most every trade to make it difficult to arrive at decisions regarding the placing of business without having to consider those who do not make an effort to emphasize the importance of honesty in all statements and advertising. So I must mention this even though you have undoubtedly told your representatives its importance. A salesman should be sure that he has the facts to back any statement he makes, for sooner or later he finds men who may have the knowledge that might brand some statement as false.

There are many intermediate grades between that group that includes those who admit they know nothing and those who speak authoritatively about their own product and others. This latter group is made up of men who have established confidence in the minds of the buyers to the extent that all information which they give is accepted and often repeated as being reliable. A representative who has established himself as a member of this group is in position to make sales on the one basis on which sales should be made. He is the one who has no need to worry as to how he will get information about plant conditions. If the front office is unable to give him the information he wants, he can always get permission from the buyer to talk to the superintendent of the plant, or the institution's or company's physician or the head of the personnel and welfare department, or any other department head who may be important in aiding this salesman to show the executives in charge the need that may exist. At the same time he is also building up the good will and making the contacts that are so necessary in making sure that when the business is placed, his company is the one that is recommended to the purchasing department as the only logical source of supply.

When you stop to think of it, a salesman is asking a big favor when he goes to the office and asks if he can be permitted to go to the plant superintendent and take up his time with questions or inspections of remote corners of the plant. Yet when a representative asks to be permitted to take the time of some department head other than the purchasing agent, and the buyer gladly gives it, it is an indication that this salesman is thought to be one that can return to that company some service that will repay it many times for the cost of the hour which the department head may give him. We have now reached the point at which the salesman is on the same side as the buyer. They are working in peace with each other, and are making every effort to work their problems out together and to the mutual advantage of all. This sales representative is in position to know when to ask for the orders, and he will get them, for he is making sales on the basis of service. The bickering about purchase cost has been forgotten, for now it is realized that this representative is well armed with facts and recommendations that save his customers money. They have learned that the door of the office and the plant may be profitably thrown open to him because he is not selling merchandise; he is selling results and service, and these are two commodities that are sold at a low cost by all who have them for sale.

———♦———

An insecticide suitable for killing moth larvae in an enclosed space consists of a solid mixture of cyclohexene oxide and a wax. Canadian Industries, Ltd. Canadian Patent No. 375,314.

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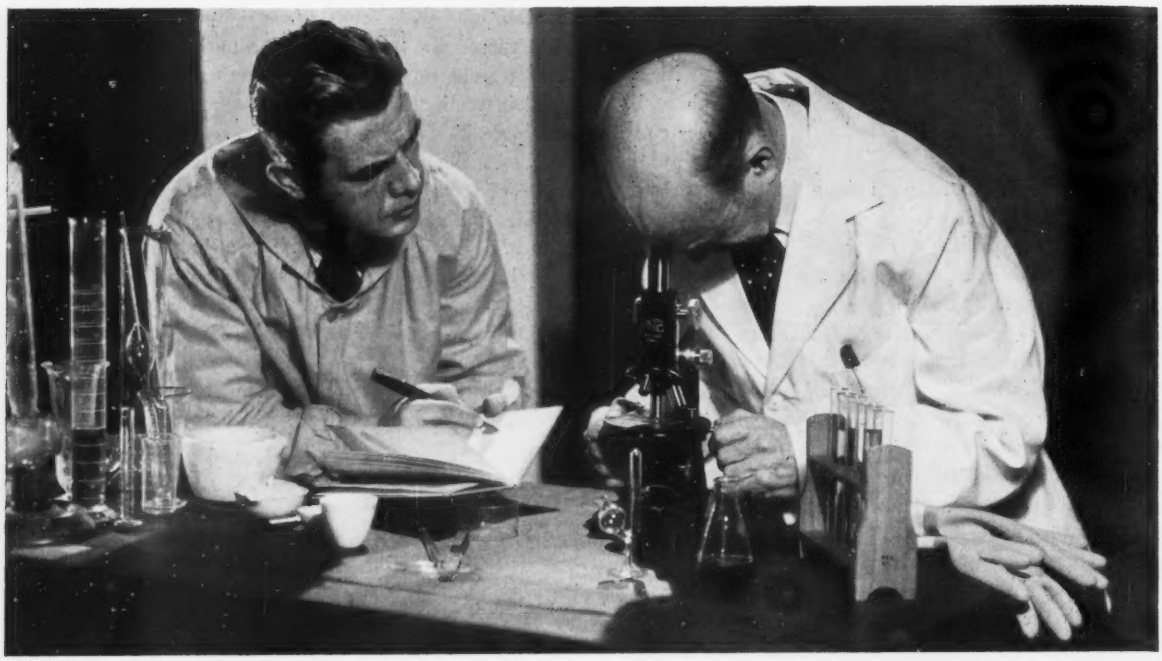

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Knockdown in Fly Sprays

Comparison of Toxicities of Pyrethrins I and II as determined by method for knockdown and mortality

By W. N. Sullivan, H. L. Haller, E. R. McGovran, and G. L. Phillips*

Bureau of Entomology & P. Q., U. S. Dept. Agriculture

CONSIDERABLE study has been made of the use of pyrethrins as fly sprays, and several methods have been developed which give a good indication of the mortality of houseflies caused by these sprays. However, aside from the studies of Richardson[6], little attention has been paid to the measurement of the rate of knockdown, although this effect is a leading factor in the popularity of pyrethrum fly sprays. Haller and Sullivan[3] have shown that pyrethrum fly sprays in which pyrethrin I predominated produced a higher mortality on houseflies than did sprays in which pyrethrin II predominated, although pyrethrin II had a good knockdown effect. With this in mind a technique was developed to give a measure of the knockdown effect on houseflies, and their subsequent mortality, from sprays containing varying proportions of pyrethrins I and II. By this method a comparison of the toxicities of the two pyrethrins was made.

Procedure and Materials

The procedure described by Campbell and Sullivan[1] for testing fly sprays by the turntable method was modified to obtain knockdown as well as mortality of the flies. The changes in the method consisted in transferring the test flies to screen-covered Petri dishes 145 mm. in diameter and 52 mm. deep, which were placed in the cage holders in the turntable. The sides of the Petri dish cages were lined with wrapping paper to enable the flies to distribute themselves over the sides and top instead of remaining on the bottom. Glass covers replaced the aluminum covers on the spray cylinders, and the aluminum discs at the bottom of the cage holders were removed. A camera using 9 x 12 cm. film was focused on the bottom of the cage. The camera setting was f. 4.5 and exposures of 1 second's duration were made. A 15-inch reflector containing a 40-watt bulb was centered 3 inches above the top of the cylinder in which the flies were to be photographed.

When the cylinder was filled with a pyrethrin-kerosene spray of sufficient concentration and the flies were exposed to the falling mist, it was usual for those affected to be knocked down in such a manner that their wings adhered to the oily surface of the bottom of the Petri dish. The light that entered the cylinder from above was diffused by the kerosene droplets so that it formed a good background for taking silhouette pictures of the paralyzed flies. All the flies except those on the bottom of the Petri dish were out of the narrow range of the sharp focus used. The sprayed flies on the bottom of the dish that were not knocked down seldom remained motionless during the entire 1-second exposure, and any movement of the flies caused a blurred image (fig. 1) which could readily be seen when counts were made from the negative. Photographs of the paralyzed flies were taken at various intervals during the test depending on the knockdown action of the spray. Knockdown counts could be made from the developed negatives, either directly or after enlargement.

Approximately 15 minutes was required to spray and photograph a series of five tests.

This technique could be applied to tests using a single chamber constructed along the same lines.

Ten lots of 100 houseflies (*Musca domestica* L.) each were exposed in the cages at the bottom of the spray cylinders for 10 minutes to three types of pyrethrum-kerosene spray. The first spray was high in pyrethrin I, the second in pyrethrin II, and the third contained about equal amounts of pyrethrins I and II. These three fly sprays were dilutions of three pyrethrin concentrates which were prepared from a commercial petroleum ether oleoresin. The separation of the pyrethrins was achieved by partition between acetic acid and petroleum ether, as described by LaForge and Haller[5]. The pyrethrin content was determined by the method of Seil[9].

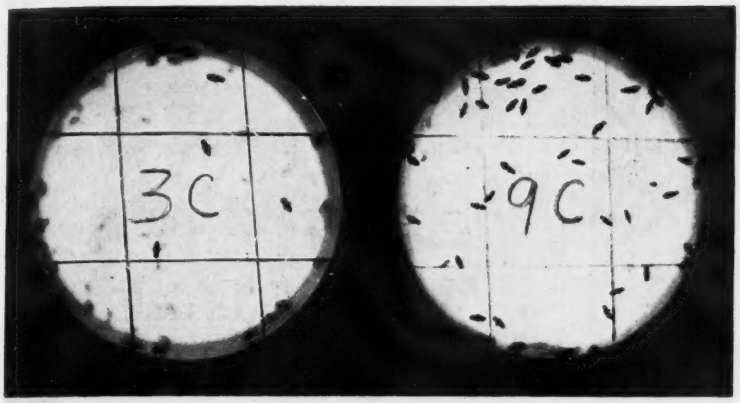
Solution 1, in which pyrethrin I predominated, was prepared by dissolving 1.50 grams of a concentrate containing 55.8 per cent of pyrethrin I and 10.6 per cent of pyrethrin II in a highly refined kerosene and diluting the solution to 200 cc. with the same solvent. Solution 2, which was high in pyrethrin II, was prepared similarly from 1.47 grams of a concentrate containing 5.5 per cent of pyrethrin I and 62.7 per cent of pyrethrin II. Solution 3, containing approximately equal parts of pyrethrins I and II, was prepared from

* Address before annual summer meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June, 1938. (Paper read by Mr. Sullivan.)

KNOCKDOWN OF HOUSEFLIES

BY FLY SPRAY HIGH IN PYRETHRIN I AND PYRETHRIN II

PYRETHRIN I (Marked 3C) PYRETHRIN II (Marked 9C)



AFTER 3 MINUTES EXPOSURE

AFTER 10 MINUTES EXPOSURE

FIG. 1

1.87 grams of a concentrate that contained 28.5 per cent of pyrethrin I and 25 per cent of pyrethrin II. These stock solutions, each containing 5 mg. of total pyrethrins per cubic centimeter, were then diluted with the kerosene to the desired concentration.

Two complete series of tests using all three solutions were made. In the first series the total pyrethrin content of the fly spray was 3 mg. per cubic centimeter and in the second series 0.25 mg. Mortality counts were made after the flies had been in recovery cages for 24 hours.

One or two lots of 100 flies each were sprayed with refined kerosene as checks during each day's tests.

Experimental Results

The results are summarized in tables 1 and 2. The mortality data in table 1 indicate that the spray which was high in pyrethrin I caused about twice the mortality among houseflies under the conditions of these tests as the one that was high in pyrethrin II, and a spray that contained approximately equal amounts of pyrethrin I and II caused an intermediate percentage of mortality.

An entirely different picture appeared, however, in regard to the knockdown effect. After 30 seconds' exposure to the sprays containing 3 mg. of total pyrethrins per cubic centimeter (table 1), the spray that was high in pyrethrin II had paralyzed about 4½ times as many flies as the spray that was high in pyrethrin I. Of the sprays that contained 0.25 mg. of total pyrethrins per cubic centimeter (table 2, fig. 1), the spray high in pyrethrin II knocked down about 11 times as many flies as the spray high in pyrethrin I after 3 minutes' exposure, and about 3½ times as many after 10 minutes' exposure. At this low concentration the mortality in 24 hours was below 20 per cent for all sprays and failed to show marked superiority for any mixture.

The differences between mortalities and between knockdowns are statistically significant as measured by the standard error of the mean.

Discussion

These results on mortality are in agreement with the findings of Ripert and Gaudin[6] but conflict in the degree of difference with the results of Gnadinger[2] and Hartzell and Wilcoxon[4], who found only a slight difference in the mortality caused by extracts high in pyrethrin II and those high in pyrethrin I. These investigators, however, used different methods than were employed in tests described in this paper.

Although the action of the pyrethrins on insects may be different from their action on fish, it is interesting to note that Ripert and Gaudin[7] found the excitement and turning-over process of the fish to be caused solely by pyrethrin II, whereas pyrethrin I caused a slow paralysis without a period of excitement.

The fact that pyrethrin I caused the higher mortality and pyrethrin II the higher knockdown raises a number of questions as to how these insecticides affect the flies. No doubt the action of either pyrethrin I or pyrethrin II on houseflies is a complicated process when considered from the physiological point of view. However, a statement of a few of the possible explanations of the results might be of interest.

Table 1—Knockdown in 30 seconds and mortality in 24 hours of houseflies by sprays containing various proportions by pyrethrins I and II at a concentration of 3 mg. of total pyrethrins per cubic centimeter of kerosene. Average of 10 tests, 100 flies per test.

Solution	Pyrethrins I	Pyrethrins II	Ratio of I to II	Knockdown In 30 Seconds		Mortality In 24 Hours	
	Mg./cc.	*Mg./cc.*		*Percent*		*Percent*	
1	2.52	0.48	5.26	12.4±	1.24*	55.0±	2.52*
2	0.24	2.76	0.088	58.9±	3.39	28.4±	2.02
3	1.60	1.40	1.14	38.2±	2.83	37.8±	1.24

*Figures in this column indicate standard error of the mean.

From tests with pure pyrethrin I and II it might be found that pyrethrin I, while superior to pyrethrin II in killing power, causes no knockdown effect. In a commercial mixture of the pyrethrins the good knockdown effect would thus be due entirely to pyrethrin II. Again the inferiority of pyrethrin II as a killing agent might be due only to its quicker paralyzing action on the flies which renders them more resistant to the spray. Houseflies sprayed when chilled are more resistant than flies sprayed at usual room temperatures, but the lower temperatures may affect the flies or the sprays in other ways than by merely immoblizing the flies. It is also possible that the vital parts of the flies come into contact with a greater amount of the spray when the flies stay active over a longer period, and this would naturally increase the mortality. A comparison of the rates of metabolism of flies sprayed with pyrethrin I and pyrethrin II might yield some interesting results.

Summary

A photographic technique to determine the knockdown effect of insecticides as well as the mortality of the insects when tested in a metal turntable apparatus is described. Tests of the knockdown and the subsequent mortality of houseflies by fly sprays high in pyrethrin I and pyre- II showed that under the conditions of these tests pyrethrin I caused a higher mortality than pyrethrin II, although the latter was much superior in its knockdown effect. Possible explanations for this behavior are discussed.

Literature Cited

[1]Campbell, F. L., and W. N. Sullivan. 1938. A metal turntable for rapid comparative tests of contact insecticides. *Soap* 14 (6):119-125, 149.

[2]Gnadinger, C. B. 1936. Pyrethrum flowers. 380 pp. Minneapolis, Minn.

[3]Haller, H. L., and W. N. Sullivan. 1938. Toxicity of hydrogenated pyrethrins I and II to the housefly. *Jour. Econ. Ent.* 31:276-277.

[4]Hartzell, A., and F. Wilcoxon. 1936. Relative toxicity of pyrethrins I and II to insects. Contrib. Boyce Thompson Inst. 8:183-188.

[5]LaForge, F. B., and H. L. Haller. 1935. Constituents of pyrethrum flowers. II. Isolation of pyrethrin II. *Jour. Amer, Chem. Soc.* 57:1893-1896.

[6]Richardson, H. H. 1931. An insecticidal method for the estimation of kerosene extracts of pyrethrum. *Jour. Econ. Ent.* 24:97-105, illus.

[7]Ripert, J., and O. Gaudin. 1935. Relative toxicity of pyrethrins I and II. *Soap* 11 (10):105. (Extract from Comp. Rend. 200:2219. June 24, 1935)

[8]Ripert, J., and O. Gaudin. 1936. Mesure de la toxicité de la pyréthrine I et de la pyréthrine II. *Ann. Falsif.* 29:132-141.

[9]Seil, H. A. 1934. Estimation of Pyrethrins. *Soap* 10(5):89-91, 111.

Table 2—Knockdown of houseflies in 3 and 10 minutes by sprays containing various proportions (same proportions as in table 1) of pyrethrins I and II at a concentration of 0.25 mg. of total pyrethrins per cubic centimeter of kerosene. Average of 10 tests, 100 flies per test.

Solution	Pyrethrins I	Pyrethrins II	Ratio of I to II	Knockdown In 3 Minutes		In 10 Minutes	
	Mg./cc.	*Mg./cc.*		*Percent*		*Percent*	
1	0.21	0.04	5.26	3.8±	0.87*	21.5±	2.47*
2	0.02	0.23	0.088	41.3±	2.60	73.8±	2.55
3	0.13	0.12	1.14	15.1±	2.2	43.0±	4.00

*Figures in this column indicate standard error of the mean.

Pyrethrum

(*From Page 89*)

the higher cost of agricultural labor on account of the acute wartime shortage, have all combined to send quotations on the pyrethrum market to unprecedently high peaks.

With the crop outlook not any better than it was last year and no considerable output increase to be expected for the next year due to extensive replanting in the Hokkaido and some southern districts, the bullish trend will probably continue for some time, unless there be a sudden slump in American demand. The upward movement is also supported by the general higher trend of commodity prices in Japan since the outbreak of the Sino-Japanese hostilities.

Two developments abroad are being followed with keen interest and even some apprehension by the Japanese pyrethrum interests. As the Japanese know only too well, their monopolistic position in the trade is based on the low cost of production in Japan and not on any particular advantage as to climate and soil. The success of British experiments in Kenya has particularly disquieted the Japanese. This African colony is now not only able to supply about five per cent of the total world production, but in the Kenya flowers the pyrethrin content runs as high as 2.0 per cent, against around one per cent in the Japanese product. New York quotations of the Kenya flower follow closely the prices for Japanese pyrethrum, mainly because there is not a sufficient quantity available to underbid the Japanese. However, from the production cost angle, underbidding might be possible, it is admitted by Japanese who have studied the situation in Africa.

The Japanese are not inclined either to make light of continued American efforts to establish pyre-

thrum as a native crop. It is generally believed in Japan that American farmers will not take to pyrethrum growing unless they are assured of a minimum price of 12c per lb. for dried and baled flowers. However, the possibility is seen in Japan that American agriculture authorities may encourage farmers with a cash subsidy, a method which was employed fifty years ago to establish the crop in Japan. In the face of these dangers, the Japanese apparently do not yet know what to do next. Indications are that efforts will be made to raise the pyrethrin content in Japanese flowers by scientific farming as one way of meeting foreign competition.

Floor Sealers

(*From Page* 93)

it has been worked out in government specifications. For a gymnasium finish, instead of the above sealer, one containing 40 per cent of resins and drying oils is used and buffing is omitted. The finish coats following the sealer are the same as above.

Specifications of the Maple Flooring Manufacturers' Association for heavy-duty finishes differ somewhat from the tentative Government specifications and include the following detailed requirements:

1. The material shall not contain more than 1.0 per cent of water unless it is an emulsion, in which case the water shall be the dispersed phase.

2. The material shall not contain more than 0.1 per cent of suspended inorganic matter.

3. The flash-point of the material shall not be under 100° F.

4. The Lovibond color of a column of sample 5¼ inches high shall not exceed 60 red units and 500 yellow units.

5. The material when applied according to the directions of the manufacturer shall not markedly darken the wood.

6. The material when applied according to the directions of the manufacturer and allowed to dry in the air for 24 hours, shall not be slippery, sticky or gummy.

7. The material when applied according to the directions of the manufacturer, shall not leave a film on the surface of the wood which will mar, scratch or flake off.

8. Artificial soil applied to the flooring finished according to the directions of the manufacturer shall be easily removable. (The artificial soil used is burnt umber ground in oil.)

9. The finish, when applied according to the directions of the manufacturer, shall not be removed when washed with soap and water at 40° C. (104° F.)

Both sets of specifications are accompanied by directions showing how the methods of testing are carried out. The Maple Flooring Manufacturers' Association may be considered an authority in the field of floor finishes, as they have studied the subject rather thoroughly and made great progress in that connection in the last few years. Their specifications are intended to cover the important practical aspects of a floor finishing material. For example, the first specification guards against an emulsion-type product with water as an external phase, as such a product would naturally swell the wood. The second point is to prevent adulteration with suspended material. The third is to reduce fire hazard to a point where it even meets the requirements of New York City with respect to the storage of such materials. New York City fire laws are unusually stringent. The fourth and fifth points are to avoid a product of too dark a color. The sixth is to avoid a sticky film, the seventh a brittle film. The eighth point shows whether the wood has actually been sealed. If it has not, soil of the nature of burnt umber will go through into the wood where it cannot be removed, providing that the product has not accomplished its purpose. The last point is to insure a finish that will not come off during ordinary cleaning operations.

Products to meet the approval of the Association must pass a rigorous test, including laboratory examination at the expense of the manufacturer. In addition the Association sends out representatives at their own expense to inspect floors that have been in use for at least six months. Products which meet the approval of the Association are listed in a circular published by the Association, also manufacturers are permitted to make the statement in their advertising that their products have been approved by the Maple Flooring Manufacturers' Association.

While the discussion here has dealt mostly with the treatment of wood floors, the same type of sealers may be recommended for use in many instances, old linoleum, magnesite, cork and certain other flooring materials.

Deodorant Spray

To prepare a deodorant spray, dissolve 100 parts of distilled olein in 100 parts of alcohol and saponify with 40-42 parts of 50°Be. caustic potash until the product gives a clear solution in water. Saponification is carried out under gentle heating. Dissolve in the soap the following perfume mixture: 10 parts of thymol, 40 of lavender oil and pine needle oil or bornyl acetate, 20 of eucalyptus oil and 10 of rosemary oil. To the solution add 3-5 per cent of 40 per cent formalin, calculated on the total amount. For spraying, 10-25 parts of this is emulsified with 1000 parts of water. *Seifensieder-Ztg.* **65,** 511 (1938).

Pyrethrin I Analysis

The method of determining pyrethrin I by steam distillation of the volatile monocarboxylic acid is inaccurate, since steam distillation destroys an average of over 10 per cent of the chrysanthemum monocarboxylic acid. It is possible to separate the two chrysanthemum acids by the selective extraction of the monocarboxylic acid with low-boiling petroleum ether, but this method requires further study before it can be applied to the estimation of the pyrethrin content of pyrethrum flowers and their commercial extracts. Athan A. Pantsios. *Ind. Eng. Chem. Anal. Ed.* **10,** 386-7 (1938).

Deodorant

A deodorant preparation in powdered form contains an alkali metal metaphosphate as an essential ingredient. Hall Laboratories, Inc. Canadian Patent No. 375,181.

Germicide

An aqueous germicidal solution contains natural glycocholic and taurocholic acids and their iodine salts. It is prepared by dissolving taurocholic acid in water, dissolving glycocholic acid in this solution, and adding iodine. Wm. R. Warner & Co., Inc. Canadian Patent No. 375,221.

Antiseptic Soap Dispersion

Aqueous soap dispersions for antiseptic use are formed containing a hardwood oil such as the caustic-soluble portion of "settled tar," a phenol derivative, and about 0.25 per cent of potassium bromide or potassium iodide to keep the dispersion from darkening in the light and air. The hardwood oil serves as a dispersing agent for the antiseptic phenol compound. Louis J. Figg, Jr. U. S. Patent No. 2,117,796.

pH—Meaning and Use

(*From Page* 31)

Select test tubes of equal size, and add 10 cc. of water to each, taking those tubes which give very nearly the same height of column. When clean and dry, place in the tube the desired fraction of a cc. of indicator solution. To this add enough buffer to make a total of one cc. Add 10 cc. of buffer. Add 2-3 drops of toluene as preservative and stopper with paraffined corks. Add one cc. of buffer to 10 cc. of sample solution and compare this in line with a tube of distilled water, with two standard tubes in line.

Many buffer solutions will keep for several months. Some indicator solutions will last for several weeks, while with others the color is more fugitive. Checks should be made from time to time by comparison with freshly prepared solutions, to see whether fading has occurred.

Many forms of comparators are on the market for convenience in comparing the standard color tubes with the sample tube. Some people use simple test tube racks. Colorimeters are sold which make use of the second method of comparison, and provide suitable means for varying the ratio of acid to alkaline color of the indicator. Such a colorimeter differs from the usual balancing type by having two containers in line with each other, one for the acid color, and one for the basic color. In the wedge type of instrument, a cylinder is divided diagonally into two compartments, so that as the cylinder is slid across the eyepiece, the thickness of layer of the two colored solutions is automatically changed.

Glass Standards

SINCE indicator solutions are subject to fading, some firms sell glass standards, colored glasses which have been calibrated against a series of indicator solutions of known pH. The indicator solution is added to the sample and the latter then compared with the series of colored glasses. Such standards are no doubt highly convenient, once it has been established that they give an accurate result with the particular type of sample to be examined.

Indicator Papers

COLORED papers for pH estimation may be prepared by treating strips of hardened filter paper with buffers and indicators.[11] These may be made with the use of a universal indicator to give a very rough estimation, or they may be made accurate to 0.2-0.4 pH. The paper treated with the indicator alone is spotted with the sample solution. Kolthoff recommends comparison with the standard while the drop is still wet. He found that methyl red, phenol red, neutral red and rosolic acid did not give good results on test papers, but that *alpha*-naphtholphthalein, pH 8.2-9.5, and curcuma 7.5-9.5, did. Prepared pH test papers of various kinds are sold.

The degree of success of many industrial operations depends on the control of pH. Any skepticism which still remains as to the value of pH determinations is apt to be based on the improper application of methods. For example, pH control is particularly important in textile processing. It is generally recommended that wool be scoured at a pH not exceeding 10. At a higher alkalinity the wool is apt to be deteriorated and to lose tensile strength. If the pH control is by a colorimetric method and the indicator reads 1.0 unit too low, due to salt error of the buffer, the scouring operation may actually be carried out at a pH of 11, which might be definitely harmful. The fault then lies not with pH control, but in a gross error in the method as it was applied. Mosher[12] states that the literature is full of inaccuracies regarding the poptimum pH for certain textile operations, as the data were obtained without making necessary corrections for inherent errors.

Some of the pH values for textile treatment on which there appears to be agreement are as follows. Mosher recommends a pH of 10-10.2 for degumming gum silk-celanese broad goods. Although wool scouring is carried out at a relatively low pH, cotton can be scoured at 12-13 without being sensibly damaged.[13, 14] Cotton is bleached with hypochlorite at a pH up to 10. A pH of 10 is found most suitable for bleaching with peroxide. Basic dyes are applied at pH 11 or a little higher. Vat colors are applied to wool at 9.2-9.4.

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[1]Foster D. Snell and Cornelia T. Snell, "Colorimetric Methods of Analysis," Vol. I, D. Van Nostrand Co., New York, (1936).
[2]I. M. Kolthoff and N. H. Furman, "Indicators." John Wiley & Sons, New York (1926).
[3]J. W. McBain, O. E. Dubois and K. G. Hay, *J. General Physiol.* 9, 461-65 (1926).
[4]Hugh H. Mosher, *Am. Dyestuff Reporter* 19, 261-3 (1930).
[5]G. S. Hartley, *Trans. Faraday Soc.* 30, 444-50 (1934).
[6]Harold L. Jones and J. Edward Smith, *Am. Dyestuff Reporter* 23, 423-7 (1934).
[7]Donald T. Jackson and John L. Parsons, *Paper Trade J.* 102, No. 3, 44 (1936).
[8]W. Mansfield Clark, "The Determination of Hydrogen Ions," 3rd ed. Williams & Wilkins Co. Baltimore (1928).
[9]J. L. Lizuis and Norman Evers, *Analyst* 47, 336 (1922).
[10]H. C. Roberts, *Metal Cleaning and Finishing* 7, 34-6 (1935).
[11]I. M. Kolthoff, *Pharm. Weekblad* 58, 961-70 (1921).
[12]High H. Mosher, *Am. Dyestuff Reporter* 19, 261-3 (1930).
[13]Robert Jaeger and Victor Coffman, *Am. Dyestuff Reporter* 16, 177-83 (1927).
[14]W. R. Kenny and A. B. Reed, *Textile Colorist* 54, 731-3, 780 (1932).

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SPRAYER NEEDS NOW!

STANDARD SPRAYERS are not stock sprayers . . . they are "tailor-made" sprayers designed individually to *your* specifications . . . look into STANDARD SPRAYERS now for 1939.

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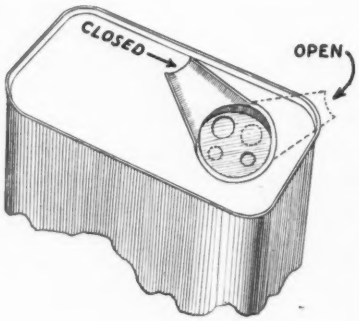

The newest and lowest cost STANDARD Self-Closing Pour Spout for your liquid insecticide, floor wax, disinfectant, oil, polish, etc. Low cost is only one of a dozen advantages. Let us tell you more about this newest pour-spout.

The ideal combination for your 1939 fly-spray . . . STANDARD container with self-closing pour spout . . . and STANDARD Tailor-Made Sprayer. Ask for further details.

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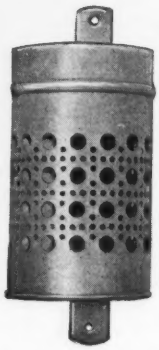
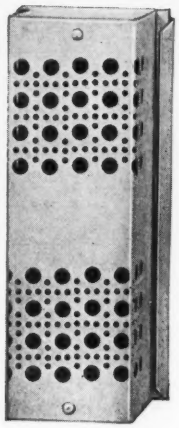
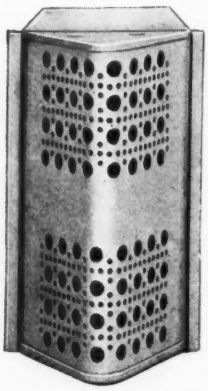


No. 1—4⅞" x 2¾"
Holds 16 oz. block or 4—4 oz. blocks



No. 3—8" x 2½" x 2¼"
Holds 24 oz. oblong blocks

No. 2—8⅜" x 3 3/16"
Holds 32 oz. block or 8—4 oz. blocks



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Attractive perforation—extra strong brackets. Made from 28 gauge metal—white coated inside and outside.

Write for prices and further details

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'Manufacturers Exclusively for the Jobber'

News.....

Organize Pioneer Chemical

Pioneer Chemical Co. has recently been formed in Los Angeles for the manufacture and distribution of sanitary chemicals. J. T. Silver and N. S. Hillman, who are also the owners of Midwestern Soap Co., at Denver, and Tri-State Chemical Co., of Spokane, Wash., have organized the new concern. Twelve salesmen have been retained to form the sales staff.

Midway Renews Radio Contract

Midway Chemical Co., manufacturers of "Fly-ded" insecticide, Chicago, has renewed its contract with the National Broadcasting Co. for another year for the currently sponsored 15-minute radio program, "Mrs. Wiggs of the Cabbage Patch," heard over a network of 19 stations Mondays through Friday.

Japan Forms Pyrethrum Guild

Japanese pyrethrum producers and exporters have announced the organization of a Pyrethrum Export Guild, comprising approximately 50 firms, for the purpose of improving the quality of their flowers. Increasing competition from British Kenya has made it necessary for the Japanese growers to establish the Guild, which will enforce stricter quality standards and establish a research laboratory for testing and conditioning purposes. Kantaro Ueyama, of the firm of Yeyamaei, Osaka, and Sasusuke Nagaoka, of Kobe, are the founders of the guild, which has its headquarters in Kobe.

FTC Restricts "Bug Dust"

Henry Field Seed Co., Shenandoah, Ia., has entered into stipulations with the U. S. Federal Trade Commission at Washington, agreeing to discontinue advertising that its product, "Bug Dust," an insecticide, kills, controls or combats bugs, insects and worms, or that it will prevent all types of fungus growth, mildew, blight, leaf spot, or diseases of the plant. Also, the company has agreed to discontinue representing that rotenone, the active ingredient of "Bug Dust," is the most powerful insecticide yet discovered when the U. S. Department of Agriculture does not recognize it as such.

O-Cedar Adds to Line

O-Cedar Co. of Canada, Ltd., Toronto, is bringing out a new product known as "O-So-Ezy," for cleaning windows.

Issue Reports on Derris

A report on the use of certain derris powder extracts for the extermination of ticks on cattle was issued recently by the Veterinary Institute at Buitenzorg, Netherlands Indies. From a limited number of tests made the effectiveness of derris powder suspensions of very low rotenone contents was apparent. However, it was announced that additional experiments will be conducted for more conclusive results. In the meantime, the Chemical Division of the Bureau of Foreign and Domestic Commerce at Washington has announced the publication of a comprehensive report on the properties of derris powder extracts, available to interested firms upon application.

Wagner Represents M-G-K

McLaughlin Gormley King Co., Minneapolis, has announced through George McLaughlin, president, that Paul M. Wagner will represent the company in the sale of its pyrethrum products and other insecticide materials in the central South and the Southwest. Mr. Wagner's headquarters are located in the Praetorian Building, Dallas, Texas. He will cover the states of Texas, Oklahoma, Louisiana, Mississippi, and Alabama. Mr. Wagner is well-known in the insecticide industry in the Southwest. He was formerly for several years associated with John Powell & Co., New York. He is also the sales representative in the Southwest for Givaudan-Delawanna, Inc., New York.

Puritan Labs. Names Pollnow

Frank J. Pollnow, president of Vestal Chemical Laboratories, Inc., manufacturers of soap dispensers, St. Louis, has been named to the board of directors of Puritan Laboratories, Ltd., sanitary chemicals, Toronto and Montreal. Puritan Laboratories was recently organized by W. F. Plowfield, formerly regional manager of West Disinfecting Co., L. I. City, N. Y. Mr. Plowfield continues as president and general manager of the company.

National Sanitary Moves

National Sanitary Products, Ltd., manufacturers of insecticides, germicides, and cosmetics, London, Ont., Canada, moved recently to new quarters in the Green Swift Building.

Hudson Sales Executives Meet

Sales representatives of H. D. Hudson Manufacturing Co., manufacturers of Hudson sprayers, Chicago, gathered recently at Hastings, Minn., for the company's annual sales conference. H. D. Hudson, president of the company, told the meetting that business had taken a definite upward turn and that 1939 was expected to be marked by further improvement.

FTC Checks "Sani-Flush"

Hygienic Products Co., Canton, O., has entered into stipulations with the U. S. Federal Trade Commission at Washington agreeing to discontinue advertising that its product, "Sani-Flush," a toilet bowl cleaner, will banish odors and kill germs generally, and that its use provides the only method by which a toilet bowl can be cleaned.

Concentrates "Dwin" Promotion

Baldwin Laboratories, Saegertown, Pa., is sponsoring a five-weeks' newspaper advertising campaign in 1650 newspapers from coast to coast to promote its insecticide, "Dwin." The theme of the advertising copy is "150,000 Grocers Can't Be Wrong," based on a claim that dealers prefer "Dwin" for their own use. According to H. W. Baldwin, president of the company, the advertising represents a departure from customary insecticide promotion in that it was purposely held up until the height of the season in order to concentrate on a more intensive drive.

New Mothproof Compound

Sanex Products Co., Chicago, has announced a new Mothproofing Compound. The company states that it has run moth tests on its new product throughout the past year and finds that materials ordinarily attacked by moths are rendered completely safe when treated with the new compound. Test materials used in the laboratory were heavy upholstering fabrics, both treated and untreated being used simultaneously in all tests. In no instance, the company states, did any treated fabric show marks of moth attack. In another series of tests, moth worms were found dead apparently as a result of attempting to eat the treated fabrics. The company which is located at 608 South Dearborn St., Chicago, states that it will market the new material under the name of Sanex Mothproofing Compound.

The "Missing" Cyanogen

A shipment of 30 cylinders of cyanogen gas was reported to have gone astray in Chicago last month. Harry Kaufman, of Chicago, told police in that city that 60 cylinders of the gas had been consigned to him by American Cyanamid & Chemical Co., New York, that he had been billed for that number, but had only received 30. Fear of what might result should the missing 30 cylinders fall into the wrong hands led him to inform the police. Confusion was added to consternation when Walter S. Gavan, sales manager of American Cyanamid & Chemical, told reporters in New York that his company had had no orders for 60 cylinders of cyanogen, and that no dealer in Chicago had reported any loss of the product. He added that 60 cylinders would be approximately a four-year supply, twice as much as his biggest Chicago customer had ever ordered. Later it developed, according to Mr. Gavan, that the missing cyanogen was a 30-pound package in solid disc form and that it was missing for less than 24 hours. Sounds like Caspar Milquetoast had a hand in this.

Wants Agency for Polish

A concern in Rio de Janeiro, Brazil, is interested in establishing an agency arrangement for the sale of automobile polishes of American manufacture. Interested parties may secure further particulars by addressing the U. S. Bureau of Foreign & Domestic Commerce, Washington, inquiry 7340.

Named Agent for "Bac-trol"

Baird & McGuire, Inc., Holbrook, Mass., have named Puritan Laboratories, Ltd., of Montreal and Quebec, as exclusive distributing agent in Canada for their new disinfectant, "Bac-trol."

Folder on "Sanaphane Service"

Ernst W. C. Toepfer, New York, has just issued a circular describing its "Sanaphane Service," which is a wall unit for public toilet rooms providing self disposing seat covers. Details concerning its use and installation, together with a description of the models offered, are discussed in the folder. Copies available on request.

Use Para for Tobacco Mold

The U. S. Bureau of Plant Industry at Washington recently completed experiments demonstrating that paradichlorobenzene gives evidence of being successful in the control of blue mold or downy mildew on tobacco.

Gem Products Expands

Gem Products & Manufacturing Co., sanitary chemicals, formerly at 12186 Petoskey Ave., Detroit, has moved to new and larger quarters at 1589 Brainard St. The new factory has approximately 15,000 square feet of floor space and has been furnished with the latest in plant and office equipment. The company is a partnership owned and operated by Nathan and Sam Rouff, brothers.

Wants Disinfectant Agency

A concern in Capetown, South Africa, is interested in communicating with American manufacturers of disinfectants for the purpose of establishing a sales agency. Interested parties may secure further information through the U. S. Bureau of Foreign & Domestic Commerce, Washington, inquiry 7537.

Appeals Cube Patent Decision

Agicide Laboratories, Milwaukee, has appealed the decision of Federal Judge Geiger delivered recently, which upheld the validity of the William J. Dennis patent covering the use of cube root as a dust and spray insecticide "with its fibrous material removed." The decision was the result of a suit brought by William J. Dennis, of the American Cube Syndicate, and American Crop Protection Co., Milwaukee, against Agicide Laboratories alleging infringement of patent. Agicide Laboratories in its appeal claims that it has not infringed on the Dennis patent since it has processed cube root without its fibrous material being removed and the patent covers the use of cube root "with its fibrous material removed."

The appeal of Agicide Laboratories is also based on the following "Findings of Fact" submitted by the plaintiffs to which Agicide took exception in the form of a memorandum prior to the court's decision, but which were, nonetheless, accepted by Judge Geiger:

". . . that the cube processed in accordance with the disclosure and claims of the Dennis patent was purchased as cube by the defendants and was made, used and sold by the defendants as a cube insecticide, and that where the word, "timbo," was substituted for cube in designating the defendant's purchases and sales the word, "timbo," actually referred to the product cube defined by the patent.

"The evidence and proofs show that the powdered product made and sold by the defendants includes the ground cube root identified by claim 1 of the patent in suit. The moist product made, used, or sold by the defendant includes the extract of cube defined by claims 2 and 4 in the patent suit."

The memorandum submitted by Agicide stated in part, that:

"The defendants, and the entire insecticide industry are entitled to a decision as to whether timbo root powder received by the defendants in original packages from Brazil is, or is not, within the range of the Dennis patent. At the trial, the plaintiffs studiously avoided any proofs or argument."

WAX EVALUATION

Standard methods for the practical evaluation of floor waxes or other wax polishes do not exist . . . there has been considerable demand for such methods in the trade . . . read "Evaluating the Modern Water Emulsion Floor Waxes" by Charles S. Glickman in the next issue of SOAP.

New Pour Nozzle

Standard Container, Inc., Bloomfield, N. J., manufacturers of metal containers and insecticide sprayers, have announced a new low-cost patented pouring spout suitable for use on metal containers for insecticides, floor waxes, disinfectants, oils, and other household products. The company states that the new spout, which it terms the Standard Self-Closing Pour Spout, pours without bubbling or spitting, that the can is permanently sealed before using, that it fits flush with the top of the can permitting even stacking, reduces the over-all height of the can, suitable for use with any type of can or any liquid, and that its cost is about one-half of that of the majority of pouring spouts now on the market. The sales department of the company is located at 30 Vesey St., New York, in charge of G. S. King.

Joins Exterminators Assn.

Professional Exterminators Association, New York, announces the addition of Happiness Exterminating Co., also of New York, to active membership. The association planned to hold an "open house" meeting at its offices, 1451 Broadway, on Aug. 31, from 4 to 6 p.m., at which time a program for fall and winter activities was to be drawn up.

New Deodorant

A new cleaner and deodorant for kitchens, lavatories, food trucks, etc., is Oakite Deodorant No. 1, recently announced by Oakite Products, Inc., New York. It is claimed to be completely odorless in that it counteracts odors without leaving any of its own.

FTC Restricts "Char-Tex"

Ford Hopkins Co., Chicago, manufacturer of "Char-Tex" antiseptic mouth wash, has entered into stipulations with the U. S. Federal Trade Commission agreeing not to advertise that "Char-Tex" kills germs or bacteria in the mouth, or that by using the preparation diseases caused by germs in the mouth can be prevented, or that the regular price of the product is $1 or any other figure which is not the price for which it is generally sold.

Wants Insecticide Agency

A concern in Capetown, South Africa, is interested in establishing an agency arrangement for the sale of insecticides of American manufacture. Interested parties may secure further particulars by addressing the U. S. Bureau of Foreign & Domestic Commerce, Washington, inquiry 7451.

Adopt Standard Size Packages

Standards for package sizes for agricultural insecticides and fungicides became effective last month after having been accepted by the industry, according to a release from the National Bureau of Standards, U. S. Department of Agriculture, at Washington. The standard types and sizes of packages are as follows:

Arsenate of lead, East of Rocky mountains, ½-pound and 1-pound canisters; 3-pound, 4-pound, and 24-pound bags; West of Rocky mountains, ½- and 1-pound canisters; 4-pound, 6-pound, 9-pound, 10-pound, and 24-pound bags. Basic lead arsenate, national, 1-pound canister; 4-pound, 5-pound and 6-pound bags.

Calcium arsenate:—Southern and Western, 100-pound drums;

national, 1-pound canister; 4-pound, and 24-pound bags. Bordeaux mixture:—National, 1-pound canister, 4-pound, 24-pound bags, and 100-pound drum. Paris Green:—National, ¼-pound, 1-pound, 5-pound, and 14-pound canisters; 10-pound drum, and 250- to 300-pound kegs.

Kenya Pyrethrum

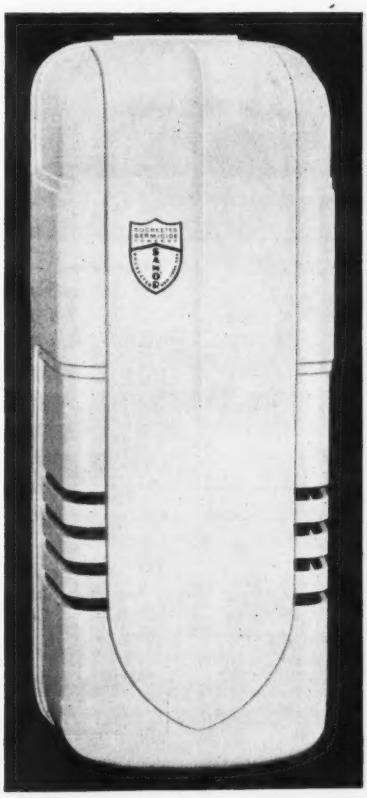
Until recently the United States has been obliged to depend almost entirely on Japan as a source of pyrethrum. Efforts to grow pyrethrum have been made in many countries, but only in Kenya has better pyrethrum than the Japanese product been raised. A tentative standard agreed on for Kenya pyrethrum is a guarantee of a minimum pyrethrin content of 1.3 per cent, as determined by the Gnadinger copper reduction method. V. A. Backley, C. B. Gnadinger and Frank Irelant, *Ind. Eng. Chem.* **30,** 835-8 (1938).

Aqueous Phenols

Phenolic products are prepared with the assistance of solution-promoting agents such as the sulfonation products of aliphatic alcohols with 6-10 carbon atoms in the molecule, together with a minor proportion of the sulfonation products of aliphatic alcohols having more than 10 carbon atoms. Such solutions may be alkaline but not sufficiently so to have a mercerizing action. They possess both wetting properties and disinfectant power and may be used for the prevention of fungus and mold formation and of putrefaction processes. They may be added to liquid soaps, mouthwashes, etc. Deutsche Hydrierwerke A.-G. British Patent No. 475,809; through Chem. Abs.

Introduces New Deodorizer

Rochester Germicide Co., Rochester, N. Y., has recently introduced a new toilet deodorizing device known as "Sanor," which has been designed to augment its sanitary service as supplied by the Calkins appliances in rest rooms of factories, public schools, office buildings, clubs, theaters, hotels, hospitals, and other institutions. The device incorporates new features both in design and operation. The cover is molded of white plaskon, which presents an



easily cleanable surface, and one that will not corrode or rust. The company points out that the new deodorizer has been planned to harmonize with the latest in toilet and urinal bowl equipment. Operating features include micrometric adjustment which controls the rate of flow of the deodorizing fluid so as to insure continuous service throughout the month between refillings. The device is loaned and installed by the company's service staff and refilled each month with the deodorizing fluid purchased by the customer.

Antiseptic

An antiseptic and germicidal composition contains a saline phenylmercury compound acidified with a tribasic acid. The Hamilton Laboratories, Inc. Canadian Patent No. 374,866.

Vestal Names Agency

Vestal Chemical Laboratories, St. Louis, has appointed Ruthrauff & Ryan advertising agency to handle promotion for its "Wax-Rite" floor wax.

Cosmos Names J. J. Gobell

Cosmos Chemical Co., Boston, has granted a license to manufacture and sell "Sanovan," household deodorant, to John J. Gobell Co., New Bedford, Mass.

Puritan Appoints Agency

Puritan Laboratories, Ltd., sanitary chemicals, Toronto and Montreal, has appointed Richardson-MacDonald advertising agency of Toronto to handle its advertising.

New Trade Marks

(*From Page* 51)

Inc., Greenville, S. C. Filed Feb. 28, 1938. Serial No. 403,491. Published May 10, 1938. Class 4.

358,637. Wax Polish. Midway Chemical Co., Jersey City, N. J. Filed March 4, 1938. Serial No. 403,704. Published May 10, 1938. Class 16.

358,651. Antiseptic. Astone Products Co., Lansdale, Pa. Filed March 10, 1938. Serial No. 403,893. Published May 10, 1938. Class 6.

358,663. Antiseptic. Bomtex Co., Kansas City. Filed March 14, 1938. Serial No. 404,027. Published May 10, 1938. Class 6.

358,664. Antiseptic. Calco Chemical Co., Bound Brook, N. J. Filed March 14, 1938. Serial No. 404,029. Published April 26, 1938. Class 6.

358,732. Soap. Wyp-A-Way Soap Co., Cleveland. Filed June 29, 1937. Serial No. 394,663. Published May 17, 1938. Class 4.

358,762. Metal Polish. Kwik Products Co., San Antonio, Tex. Filed June 12, 1934. Serial No. 352,586. Published May 17, 1938. Class 4.

358,890. Cleansing Powder. Fort Orange Chemical Co., Albany, N. Y. Filed Feb. 25, 1938. Serial No. 403,385. Published May 17, 1938. Class 4.

358,934. Cleansing Product. William T. Casey, Boston. Filed

Classified Advertising

Brings excellent results at a minimum cost. Rates are only 10c per word with a minimum charge of $2 per issue (position wanted advertisements accepted at half rates). Whether you have some surplus equipment or material for sale, have a position open or are looking for a new connection, etc., use space in the Classified Section of *Soap.* It ★★★ will place you in touch with the entire soap and sanitary products industry.

March 19, 1938. Serial No. 404,245. Published May 17, 1938. Class 4.

359,044. Cleaning Devices. Metal Textile Corp., West Orange, N. J. Filed Dec. 6, 1937. Serial No. 400,517. Published May 24, 1938. Class 4.

359,157. Shampoos. William A. Webster Co., Memphis, Tenn. Filed Oct. 2, 1937. Serial No. 398,069. Published May 24, 1938. Class 6.

359,163. Antiseptic. Como-Cleen Co., Baltimore. Filed Nov. 11, 1937. Serial No. 399,613. Published March 1, 1938. Class 6.

359,183. Insecticide. Andrew Wilson, Inc., Springfield, N. J. Filed Jan. 12, 1938. Serial No. 401,842. Published May 17, 1938. Class 6.

359,192. Preparation for Treating Athlete's Foot. H. E. Matheny, Charleston, W. Va. Filed Jan. 28, 1938. Serial No. 402,405. Published May 17, 1938. Class 6.

359,206. Detergent. Phosphate Mining Co., New York. Filed Feb. 17, 1938. Serial No. 403,146. Published May 31, 1938. Class 4.

359,215. Antiseptic. C. Nelson Smith Co., West Allis, Wis. Filed March 1, 1938. Serial No. 403,565. Published May 17, 1938. Class 6.

359,255. Cleansing Preparation. Fairchild & French, Philadelphia. Filed March 21, 1938. Serial No. 404,289. Published May 31, 1938. Class 4.

359,258. Antiseptic. Effantab Products, Inc., New Rochelle, N. Y. Filed March 22, 1938. Serial No. 404,355. Published May 17, 1938. Class 6.

359,273. Insecticides. Monsanto Chemical Co., St. Louis. Filed March 28, 1938. Serial No. 404,577. Published May 24, 1938. Class 6.

359,304. Soaps. Elizabeth Arden, Inc., New York. Filed April 8, 1938. Serial No. 405,006. Published May 31, 1938. Class 4.

359,311. Preparation for the Treatment of Athlete's Foot. Bethesda Pharmacal Co., Bethesda, Md. Filed April 14, 1938. Serial No. 405,239. Published May 24, 1938. Class 6.

359,312. Insecticides. Lin-tox Corp., Port Chester, N. Y. Filed April 14, 1938. Serial No. 405,260. Published May 24, 1938. Class 6.

359,457. Powdered Soap. Ward Chemical & Mfg. Co., New York. Filed Dec. 10, 1936. Serial No. 386,611. Published March 9, 1937. Class 4.

359,524. Liquid Cleanser. Acme Chemical Co., Milwaukee. Filed Feb. 5, 1938. Serial No. 402,703. Published June 14, 1938. Class 4.

359,526. Powdered Soap. Kletam Mfg. Co., Wilkes-Barre, Pa. Filed Feb. 7, 1938. Serial No. 402,809. Published June 14, 1938. Class 4.

359,552. Soap. Howard E. Pillsbury, Newburyport, Mass. Filed March 16, 1938. Serial No. 404,135. Published June 14, 1938. Class 4.

359,560. Detergent. Harold Weed McCulloch, Belleville, N. J. Filed March 21, 1938. Serial No. 404,321. Published June 14, 1938. Class 4.

359,581. Shampoos. Faberge, Inc., New York. Filed March 22, 1938. Serial No. 404,358. Published June 14, 1938. Class 6.

Germicide

A germicide is produced by condensing an appreciable excess of a cresol with amyl alcohol to produce amylated cresol. The condensation product is mixed with an alkaline solution of a strength to dissolve a portion only of the condensation product. The clear solution is separated from the undissolved portion and used as a germicide. Upjohn Co. Canadian Patent No. 374,268.

Sparhawk Opens N. Y. Branch

Sparhawk Co., Sparkill, N. Y., essential oils and aromatic chemicals, has opened a New York office at 232 Water St. John F. Fogarty is in charge. The firm will carry a complete line of essential oils and perfuming materials at the new branch, which occupies three floors. The new location will also serve as a distribution point for the firm's export business, shipping facilities being inadequate from the main plant at Sparkill.

Dow Elects Doan Vice-Pres.

Leland I. Doan, sales manager, Dow Chemical Co., Midland, Mich., has been named a vice president of the company. He will continue to be in charge of sales. Mr. Doan has been with Dow Chemical for 21 years.

New MM&R Price List

Magnus, Mabee & Reynard, Inc., New York, have issued a new catalog and price list for their line of aromatic chemicals and essential oils. Copies are available on request.

Enlarges Chicago Plant

Owens-Illinois Can Co., Toledo, O., has just completed arrangements for the construction of an addition, measuring 200 feet by 510 feet, to its Chicago plant on West 65th St. The addition will cost approximately $200,000, it was announced, and was made necessary by an increased volume of business throughout the mid-west.

Anchor Hocking Earns $222,583

Anchor Hocking Glass Corp., Lancaster, Ohio, reports a net profit of $222,583 for the first six months of 1938, which is equivalent, after dividend requirements on the $6.50 preferred stock, to 12½ cents a share on 715,550 common shares.

D&O Issues New Price List

Dodge & Olcott Co., New York, has just published a new wholesale price list for its line of essential oils and aromatic chemicals. Copies available on request.

Fritzsche Manager in N. Y.

H. Messtorff, manager of Productos Fritzsche Bros., S. A., Mexico City, Mexico, affiliate of Fritzsche Bros., Inc., New York essential oils house, was a visitor at the firm's home office in New York recently. Mr. Messtorff has been in active charge of the company's Mexican business for over a year.

LIQUIDATING

MACHINERY AND EQUIPMENT

J. T. ROBERTSON CO. SYRACUSE, N. Y.

ATTENTION SOAP & SANITARY PRODUCTS MANUFACTURERS!

This is one of the finest soap plants we have ever liquidated. The machinery and equipment is all of recent design and in excellent condition. Don't miss this opportunity to fill your soap machinery requirements at a small fraction of the usual cost.

Outstanding Bargains from Robertson Plant

Wurster & Sanger Complete Double Effect Glycerin Evaporator

J. M. Lehmann 5 Roll Water Cooled 16" x 40" Steel Polishing Mill

Proctor & Schwartz Soap Chip Dryer 48" Single Roll

Proctor & Schwartz Soap Chip Dryer 36" Single Roll

Proctor & Schwartz Soap Chip Dryer 5 Cooling and Crushing Rolls

3 Jones Automatic Soap Presses

Ferguson & Haas Automatic Wrapping Machine

3 Blanchard No. 14 Soap Powder Mills

2 Shriver Filter Presses 30" x 30" 42 Plates

Pneumatic Scale Corp. Automatic Can Filler

2 Pneumatic Scale Corp. Automatic Filling and Weighing Machines with Top and Bottom Sealers for Filling Soap Chips and Powders into Packages

3 H-A Automatic Cutting Tables

2 H-A Automatic Slabbers

2 H-A Jumbo 10" Plodders

2 H-A Preliminary 8" Plodders

2 H-A Amalgamators

8 H-A Crutchers

6 H-A 4 Roll Granite Toilet Soap Mills

2 Dopp Crutchers

200 Soap Frames

3 Bliss Sealers

Also Kettles, Tanks, Machine Shop Equipment, Barrel Fillers, Pumps, Motors, Etc.

We invite your inspection and inquiries. All machinery and equipment is priced for immediate sale.

NEWMAN TALLOW & SOAP MACHINERY CO.

1051 W. 35th ST., CHICAGO, ILLINOIS

OUR FORTY YEARS SOAP EXPERIENCE CAN HELP SOLVE YOUR PROBLEMS

Classified Advertising

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Chemist and Perfumer: Man with 10 years' experience in sales and plant, cosmetics, sanitary supplies and perfuming raw materials, desires to make new connection. Address Box No. 447, care *Soap*.

Soapmaker — perfumer, chemist — long experienced in profitable laundry and toilet soap manufacture. Salary reasonable. Address Box No. 448, care *Soap*.

Insecticide Chemist—With ten years' experience in manufacture and testing household and agricultural insecticides, and other household specialties, desires to make new connection where his experience will be of value. Completely familiar insecticide chemistry, and money-saving methods of manufacture. For further details, address Box No. 433, care *Soap*.

Oil Refining: Man with many years experience in practical soap and oil plant work desires new connection. Thoroughly familiar Austrian process affording marked savings in refining vegetable oils. Also expert in soaps, fatty acids, etc. Address Box No. 455, care *Soap*.

Soap Chemist: Man with wide experience in practical soap plant chemistry and production methods, desires connection modern plant. Services available part time if desired. For further details, address Box No. 456, care *Soap*.

Positions Open

Attractive Sales Proposition in State of Florida to an experienced sanitary supply salesman who can show a proven sales record. References required. Address Box No. 451, care *Soap*.

Floor Wax Distributors Wanted: We manufacture a 16 per cent solid, high Carnauba Base Wax, beautiful lustre, very durable, non-slippery, water resistant and priced very low. We assure you it will be worth your while to investigate. Write Fox Lake Chemical Co., Fox Lake, Ill.

Raw Materials and Equipment

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 126 for page numbers. *"Say you saw it in SOAP."*

ALKALIES

John A. Chew, Inc.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
Solvay Sales Corp.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

BULK AND PRIVATE BRAND PRODUCTS

Associated Chemists, Inc.
Baird & McGuire, Inc.
Buckingham Wax Corp.
Candy & Co.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Federal Varnish Co.
Fuld Bros.
Harley Soap Co.
Koppers Co.
Kranich Soap Co.
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Shawmut Specialty Co.
Sweeping Compound Mnfrs. of N. Y.
Uncle Sam Chemical Co.
T. F. Washburn Co.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American-British Chemical Supplies
John A. Chew, Inc.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
Hooker Electrochemical Co.
Industrial Chemical Sales Div.
Innis, Speiden & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
E. M. Sergeant Pulp & Chem. Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)

American-British Chemical Supplies
Baird & McGuire, Inc.
T. G. Cooper & Co.
Innis, Speiden & Co.
Koppers Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Pylam Products Co.

CONTAINERS and CLOSURES

American Can Co. (Tin Cans and Steel Pails)
Anchor-Hocking Glass Corp. (Closures & Bottles)
Continental Can Co. (Tin Cans)
Hazel-Atlas Glass Co. (Bottles and Jars)
National Can Co. (Cans)
Standard Container, Inc. (Cans and Closures)
Sutherland Paper Co. (Packages)
Wilson & Bennett Mfg. Co. (Steel Pails and Drums)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.
National Sanitary Chemical Co.

ESSENTIAL OILS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Felton Chemical Co.
Firmenich & Co.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Mabee & Reynard, Inc.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

INSECTICIDES, SYNTHETIC

Kessler Chemical Co.
Rohm & Haas Co.

(*Continued on page* 124)

Wanted: Salesmen calling on soap manufacturers. Carry side line. Permanent proposition. Excellent specialties. Commission basis. Address Box No. 446, care *Soap.*

Miscellaneous

For Sale: Five used six hundred pound Soap Frames complete with individual trucks. For details address Box No. 453, care *Soap.*

Volcanic Ash of all colors and grades; samples and prices upon request. Mid-Co. Products Company, Kansas City, Missouri.

Non-Skid No-Rubbing Wax—A remarkable product. A large board of education reported it less slippery than any other wax. A national chain of stores had it approved by their insurance company. Sample it yourself. Low prices. Twi-Laq Chemical Co., 221 Sullivan St., Brooklyn, N. Y.

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Complete Soap Plant Equipment for Sale: Proctor soap chip dryer; automatic soap press; wrapping machine: 4 roll stone mills; foot press; plodders 6", 8", 10"; soap boiling kettles; 6 knife chipper; two-way cutting table; frames; filter presses; crutchers; mixers, boilers. Stein Equipment Corp., 426 Broome St., New York City.

Sense Appeal—Texol Self-Polishing Wax is a waxier wax embodying rich luster and an appealing, refreshing odor. All No. 1 Carnauba wax-content. Inquiries invited. Texol Chemical Works, Clinton, Massachusetts.

Sulfonated Oil—100% sulfonated castor oil in five gallon cans. Lowest prices. Western Reserve Laboratories, 6619 Denison Ave., Cleveland, Ohio.

For Sale: Building, machinery, formulas for manufacturing cleaners, waxes, polishes for autos, furniture, metal, glass. Established twenty years. Address Box No. 457, care *Soap.*

Wax—Guaranteed water-proof wax—dries to high lustre. Best buy of the year. Special price to jobbing trade only. Write now for samples and prices. Eagle Chem. Products Co., 12 Longworth St., Newark, N. J.

Carpet Beetles, and other living insects for experimental purposes. Reared in quantities. H. Scudder, Entomology Dept. Cornell University, Ithaca, N. Y.

Raw Material and Equipment Guide

(*Continued from page* 122)

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MACHINERY

J. H. Day Co. (Mixers, Sifters, Mills)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
Ingersoll Steel & Disc. Div. Borg-Warner Corp.
International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc)
Stokes & Smith Co. (Packing Machinery)
Viking Pump Co. (Pumps)
Wurster & Sanger (Soap, Oil and Glycerin)

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.

MISCELLANEOUS

American Standard Mfg. Co. (Wax Applicator)
Anchor-Hocking Glass Corp. (Metal Caps)
T. G. Cooper & Co. (Waxes)
Dicalite Co. (Insecticide Carrier, Filtering Materials, Abrasives)
Dobbins Mfg. Co. (Pails, Mop Wringers, etc.)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants and Waxes)
Koppers Company (Coal, Coke, Roofing Materials)
Lenape Trading Co. (Waxes)
Pennsylvania Refining Co. (White Oils)
Pylam Products Co. (Lathering Agent)
S. Schwabacher & Co. (Naphthenic Soaps, White Mineral Oils)
Victoria Paper Mills Co. (Paper Accessories)

OILS AND FATS

T. G. Cooper & Co.
Eastern Industries
Independent Mfg. Co.
Industrial Chemical Sales Div.
Leghorn Trading Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
E. M. Sergeant Pulp & Chemical Co.
Wecoline Products Co.
Welch, Holme & Clark Co.

PARADICHLORBENZENE

John A. Chew, Inc.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING COMPOUNDS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Felton Chemical Corp.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

PETROLEUM PRODUCTS

Atlantic Refining Co.
O'Connor & Kremp
Pennsylvania Refining Co.
S. Schwabacher & Co.
L. Sonneborn Sons.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract, Derris Products

Associated Chemists, Inc.
Derris, Inc.
Jacobus F. Frank
Hammond Paint & Chem. Co.
Lenape Trading Co.
S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.

SILICATES

Cowles Detergent Co.
E. I. du Pont de Nemours & Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SOAP DISPENSERS

Bobrick Mfg. Co.
Clifton Chemical Co.
Fuld Bros.
Presto Mfg. Co.

SPRAYERS

Breuer Electric Mfg. Co.
Dobbins Mfg. Co.
Fumeral Co.
Lowell Manufacturing Co.
Standard Container, Inc.
Universal Metal Products Co.

TRI SODIUM PHOSPHATE

John A. Chew, Inc.
E. I. du Pont de Nemours & Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

Professional Directory

Pease Laboratories, Inc.
Est. 1904
39 West 38th Street — New York

Chemical, Bacteriological and Pathological Testing and Research. Special Animal Investigations of Pharmacologic, Toxic or Skin Irritating Properties.

H. A. SEIL, Ph.D — E. B. PUTT, Ph.C., B.Sc.
SEIL, PUTT & RUSBY, INC.
Analytical and Consulting Chemists
Specialists in the Analysis of Pyrethrum Flowers, Derris Root, Barbasco, or Cube Root—Their Concentrates and Finished Preparations
ESSENTIAL OILS — SOAP
16 East 34th Street, New York, N. Y.

STILLWELL AND GLADDING, Inc.
Analytical and Consulting Chemists
Members Association of
Consulting Chemists and Chemical Engineers
130 Cedar Street — New York City

SOAPS — DETERGENTS
Analyses *Development*
Consultation *Formulas*
HochstadterLaboratories
INCORPORATED
254 West 31st St. — New York City

KILLING
strength of Insecticides
by PEET GRADY METHOD
(Official I. & D. code method) and
PYRETHRINS in PYRETHRUM FLOWERS
(by Gnadinger's Method)
We raised and killed more than 1 million flies in the last 2 years
ILLINOIS CHEMICAL LABORATORIES, INC.
5235 WEST 65th STREET — CHICAGO, ILL.

FOSTER D. SNELL, INC.
Chemists—Engineers
Every form of Chemical Service
305 WASHINGTON STREET — BROOKLYN, N. Y.

CONSULTANTS
offering their services to manufacturers of soaps and sanitary specialties should apprise the industry of their facilities through this professional card department. SOAP reaches 4,000 firms needing help of a professional nature.

Patents—Trade Marks
All cases submitted given personal attention.
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Index to Advertisers

For product classification see pages 122 and 124

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Every effort is made to keep this index free of errors, but no responsibility is assumed for any omission.

Tale Ends

BILLY B. VAN is now in the candy business. The daddy of Billy B. Van's Pine Tree Soap, which rose to sudden prominence a few years back and then fell like a meteor over the horizon, is now manufacturing and selling peanut crunch, peanut brittle, and New England Kisses in the perpetual sunshine of Newport, New Hampshire. Billy, always a grand character, famous for years on the American stage and as a public speaker, is no chicken any longer, but with the energy and pep of a two-year-old, he has never stayed licked for long. Now he is back with a bang as "Billy B. Van, The Candy Man."

* * *

With more than usual misgivings, we note that during 1939, something like 44 state legislatures will be in session, not to mention that old pal of American business,—the Congress of the U. S. A. All we can think of at the moment is the admonition of that well-worn story,—"Hold your hats, boys, here we go again!"

* * *

What is the U. S. Government Specification for soap powder? What is the soap consumption of Peru? Who sells wax applicators? Look in your 1938 *Soap and Sanitary Chemicals* BLUE BOOK, and there you will find the full dope. And what's more, a veritable mine of other valuable condensed information. Use your BLUE BOOK!

* * *

Here are a few of the subjects which the editor tells us are going to be the titles of articles in *Soap* during the next month or two:—practical evaluation of floor waxes, a new series on the synthetic detergents and their raw materials, a study of bentonite, clays and other soap fillers, a discussion of laundry detergent specifications, which pyrethrin does the killing, are potash or soda soaps better for floors, etc. Don't miss 'em!